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Reading eggs

8th Grade Worksheet Bundle:

Volume Two

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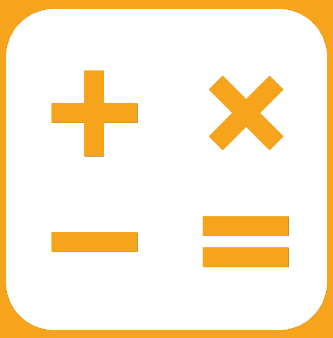


Math Activities

Grade 8 Math: Rational and Irrational Numbers

1. Which of the following best describes the set of numbers shown below?

$$\{\sqrt{2},\ \sqrt{3},\ \pi,\ \sqrt{5}\}$$

- **A.** neither rational nor irrational
- **B.** irrational
- **C.** both rational and irrational
- **D.** rational

---

2. What is the definition of an irrational number?

- **A.** a number that can be written as a fraction but not as a decimal
- **B.** a number that cannot be expressed as a fraction, $\frac{p}{q}$, where *p* and *q* are integers and *q* is not equal to zero
- **C.** a number that can be expressed as a fraction, $\frac{p}{q}$, where *p* and *q* are integers and *q* is not equal to zero
- **D.** a number that is more than 10 digits

---

3. Which of the following is a rational number?

- **A.** π
- **B.** $\sqrt{36}$
- **C.** $\sqrt{34}$
- **D.** $\sqrt{83}$

---

4. Which statement correctly describes the number $\sqrt{22} = 4.690415...$?

- **A.** The number is irrational because it can be written as a non-repeating, non-terminating decimal.
- **B.** The number is rational because it can be written as a non-repeating, non-terminating decimal.
- **C.** The number is irrational because it can be written as a terminating decimal.
- **D.** The number is rational because it can be written as a terminating decimal.

5. Which of the following is a rational number?

- **A.** $\sqrt{51}$
- **B.** π
- **C.** $\sqrt{21}$
- **D.** $\sqrt{121}$

6. Which of the following is an irrational number?

- **A.** $\sqrt{9}$
- **B.** 1.9
- **C.** $\sqrt{67}$
- **D.** $\sqrt{81}$

7. Which of the following is an irrational number?

- **A.** $\sqrt{51}$
- **B.** 3.8
- **C.** $\sqrt{9}$
- **D.** $\frac{4}{5}$

8. Which of the following is an irrational number?

- **A.** $\sqrt{18}$
- **B.** $\sqrt{49}$
- **C.** 3.8
- **D.** $\frac{3}{10}$

---

9. Which number is most likely an irrational number?

2.200000000...
21.844444444...
45.320320320...
0.180942869...

- **A.** 21.844444444...
- **B.** 0.180942869...
- **C.** 2.200000000...
- **D.** 45.320320320...

---

10. Which statement correctly describes the number $-12.83\overline{08}$?

- **A.** The number is irrational because it is a non-repeating, non-terminating decimal.
- **B.** The number is irrational because it is a repeating decimal.
- **C.** The number is rational because it is a terminating decimal.
- **D.** The number is rational because it is a repeating, non-terminating decimal.

Answers: Rational & Irrational Numbers

1. B
2. B
3. B
4. A
5. D
6. C
7. A
8. A
9. B
10. D

Explanations

1. Any number that can be expressed as an integer divided by a nonzero integer is a rational number. In decimal notation, rational numbers either terminate or repeat.

Any number that has a nonterminating or nonrepeating decimal representation is an irrational number.

The given set of numbers contains all **irrational** numbers.

2. An irrational number is **a number that cannot be expressed as a fraction, $\frac{p}{q}$, where *p* and *q* are integers and *q* is not equal to zero**.

3. Rational numbers can be written as $\frac{p}{q}$, where *p* and *q* are both integers and *q* is not equal to zero.

Find the number that can be written as $\frac{p}{q}$.

$$\sqrt{36} = \frac{6}{1}$$

Since $\sqrt{36}$ can be written as a fraction of two integers, $\sqrt{36}$ is a rational number.

4. A number that terminates in zeros or repeats a sequence of digits to the right of the decimal point is called a rational number.

A number that does not terminate nor repeat a sequence of digits to the right of the decimal point is called an irrational number.

The number $\sqrt{22}$ can be rewritten as 4.690415..., which does not terminate nor repeat a sequence of digits. So, **the number is irrational because it can be written as a non-repeating, non-terminating decimal.**

5. Rational numbers can be written as $\frac{p}{q}$, where *p* and *q* are both integers and *q* is not equal to zero.

Find the number that can be written as $\frac{p}{q}$.

$$\sqrt{121} = \frac{11}{1}$$

Since $\sqrt{121}$ can be written as a fraction of two integers, $\sqrt{121}$ is a rational number.

6. Irrational numbers cannot be written as $\frac{p}{q}$, where *p* and *q* are integers.

So, eliminate the answer choices that can be written as $\frac{p}{q}$ and are rational numbers.

$$\sqrt{9} = \frac{3}{1}$$

$$\sqrt{81} = \frac{9}{1}$$

$$1.9 = \frac{19}{10}$$

Since $\sqrt{67}$ cannot be written as a fraction of two integers, $\sqrt{67}$ is an irrational number.

7. Irrational numbers cannot be written as $\frac{p}{q}$, where *p* and *q* are integers.

So, eliminate the answer choices that can be written as $\frac{p}{q}$ and are rational numbers.

$$\sqrt{9} = \frac{3}{1}$$

$$\frac{4}{5} = \frac{4}{5}$$

$$3.8 = \frac{38}{10} = \frac{19}{5}$$

Since $\sqrt{51}$ cannot be written as a fraction of two integers, $\sqrt{51}$ is an irrational number.

8. Irrational numbers cannot be written as $\frac{p}{q}$, where *p* and *q* are integers.

So, eliminate the answer choices that can be written as $\frac{p}{q}$ and are rational numbers.

$$\sqrt{49} = \frac{7}{1}$$

$$\frac{3}{10} = \frac{3}{10}$$

$$3.8 = \frac{38}{10} = \frac{19}{5}$$

Since $\sqrt{18}$ cannot be written as a fraction of two integers, $\sqrt{18}$ is an irrational number.

9. A number that does not terminate in zeros or in a repeating sequence of digits to the right of the decimal point is called an irrational number.

The number 2.200000000... terminates in zeros, so it is likely a rational number.

The number 21.844444444... has a repeating sequence of 4, so it is likely a rational number.

The number 45.320320320... has a repeating sequence of 320, so it is likely a rational number.

The number 0.180942869... neither terminates in zeros nor has a repeating sequence of digits to the right of the decimal point. So, it is not likely a rational number.

Therefore, **0.180942869...** is most likely an irrational number.

10. A number that terminates in zeros or repeats a sequence of digits to the right of the decimal point is called a rational number.

A number that does not terminate nor repeat a sequence of digits to the right of the decimal point is called an irrational number.

The number $-12.83\overline{08}$ has a repeating sequence of 08, and therefore does not terminate. So, **the number is rational because it is a repeating, non-terminating decimal.**

Grade 8 Math: Square and Cube Roots

1. Simplify: $\sqrt[3]{216}$

- **A.** 8
- **B.** 6
- **C.** 16
- **D.** 36

---

2. Solve the equation given below for *x*.

$$x^2 = \frac{79}{49}$$

- **A.** $x = \pm \frac{\sqrt{79}}{7}$
- **B.** $x = \pm \frac{79}{49}$
- **C.** $x = \pm \frac{79}{7}$
- **D.** $x = \pm \frac{\sqrt{79}}{49}$

---

3. Determine which of the following is the solution to the equation below.

$$x^3 = 10$$

- **A.** $\sqrt[3]{30}$
- **B.** $\sqrt[3]{10}$
- **C.** $\pm\sqrt[3]{10}$
- **D.** $\pm\sqrt[3]{30}$

---

4. Which of the following best describes the solution to the equation below?

Note: Only consider the positive solution.

$$x^2 = 27$$

- **A.** It is a repeating decimal.
- **B.** It is an irrational number.
- **C.** It is greater than zero but less than one.
- **D.** It is a rational number.

---

5. Solve the equation for *x*.

$$x^3 = \frac{343}{64}$$

- **A.** $x = \frac{343}{4}$
- **B.** $x = \frac{49}{16}$
- **C.** $x = \frac{7}{4}$
- **D.** $x = \frac{7}{64}$

---

6. Determine which of the following are the solutions to the equation below.

$$x^2 = 13$$

- **A.** $\pm\sqrt{26}$
- **B.** $\pm\sqrt{13}$
- **C.** 26
- **D.** 13

---

7. Simplify: $\sqrt{49}$

- **A.** 6
- **B.** 9
- **C.** 7
- **D.** 8

---

8. Determine which of the following are solutions to the equation below.

$$x^2 = \frac{1}{64}$$

- **A.** $x = \frac{1}{32}$
- **B.** $x = \frac{1}{8}$
- **C.** $x = \pm\frac{1}{8}$
- **D.** $x = \pm\frac{1}{32}$

---

9. Simplify.

$$\sqrt[3]{64}$$

- **A.** 2
- **B.** 4
- **C.** 16
- **D.** 8

---

10. Simplify: $\sqrt{225}$

- **A.** 14
- **B.** 13
- **C.** 15
- **D.** 16

Answers: Square & Cube Roots

1. B
2. A
3. B
4. B
5. C
6. B
7. C
8. C
9. B
10. C

Explanations

1. When a number is written under a radical sign with a 3 on top $(\sqrt[3]{\ })$, it is read as "the cube root of" that number.

Since $6^3 = 216$, $\sqrt[3]{216} = \mathbf{6}$.

2. Solve the given equation for x.

$$x^2 = \frac{79}{49}$$
$$\sqrt{x^2} = \sqrt{\frac{79}{49}}$$
$$x = \pm \frac{\sqrt{79}}{\sqrt{49}}$$
$$x = \pm \frac{\sqrt{79}}{7}$$

So, $x = \pm \frac{\sqrt{79}}{7}$.

3. Find the number that equals 10 when cubed.

$$\left(\sqrt[3]{10}\right)^3 = 10$$

Therefore, the solution to the equation is $\sqrt[3]{10}$.

4. The solution to the equation $x^2 = p$ is a rational number when p is a perfect square.

In this case, $p = 27$. Since 27 is not a perfect square, the solution to the equation is not rational.

Therefore, **it is an irrational number**.

5. Solve the given equation for *x*.

$$x^3 = \frac{343}{64}$$

$$\sqrt[3]{x^3} = \sqrt[3]{\frac{343}{64}}$$

$$x = \frac{\sqrt[3]{343}}{\sqrt[3]{64}}$$

$$x = \frac{7}{4}$$

6. Find the numbers that equal 13 when squared.

$$(\sqrt{13})^2 = 13$$

$$(-\sqrt{13})^2 = 13$$

Therefore, the solutions to the equation are $\pm\sqrt{13}$.

7. When a number is written inside a radical sign ($\sqrt{\ }$), it is read as "the square root of" that number.

Since $7^2 = 49$, the square root of 49 is **7**.

8. To solve for *x*, take the square root of both sides.

$$x^2 = \frac{1}{64}$$

$$\sqrt{x^2} = \sqrt{\frac{1}{64}}$$

$$\sqrt{x \cdot x} = \frac{\sqrt{1}}{\sqrt{64}}$$

$$\sqrt{x \cdot x} = \frac{\sqrt{1}}{\sqrt{8 \cdot 8}}$$

$$x = \pm\frac{1}{8}$$

Therefore, the solution to the equation is shown below.

$$x = \pm\frac{1}{8}$$

9. When a number is written under a radical sign with a three on top $\left(\sqrt[3]{\ }\right)$, it is read as "the cube root of" that number.

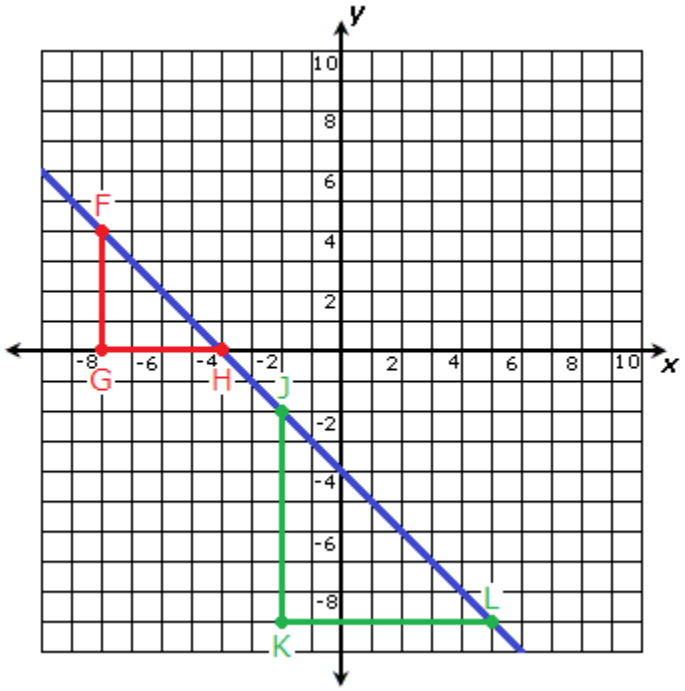
Since $4^3 = 64$, $\sqrt[3]{64} =$ **4**.

10. When a number is written inside a radical sign ($\sqrt{\ }$), it is read as "the square root of" that number.

Since $15^2 = 225$, the square root of 225 is **15**.

Grade 8 Math: Graphs of Linear Equations

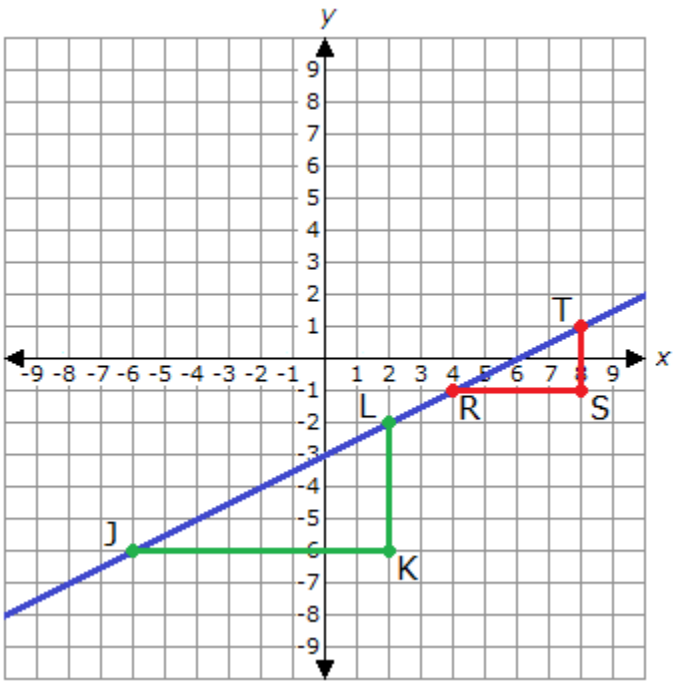
1. The slope of the line shown between the points (-8, 4) and (-4, 0) is equal to its slope between the points (-2, -2) and (5, -9).



Which of the following is true?

- **A.** $\frac{FG}{FH} = \frac{JK}{KL}$
- **B.** $\frac{FG}{GH} = \frac{JK}{KL}$
- **C.** $\frac{FH}{GH} = \frac{KL}{JL}$
- **D.** $\frac{FG}{GH} = \frac{JK}{JL}$

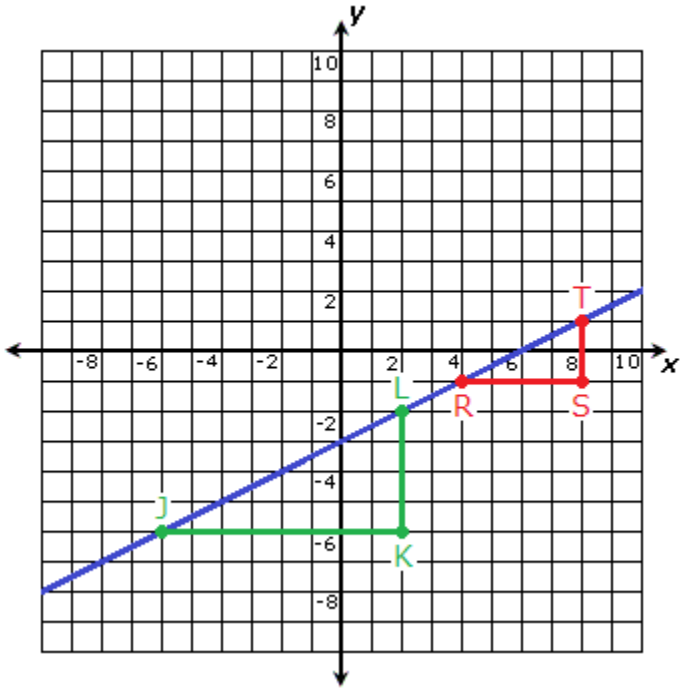
2.



Triangle LKJ is similar to triangle TSR. Which of the following statements is true?

- **A.** The slope of JL is equal to the slope of SR.
- **B.** The slope of KJ is equal to the slope of RT.
- **C.** The slope of KJ is equal to the slope of TS.
- **D.** The slope of JL is equal to the slope of RT.

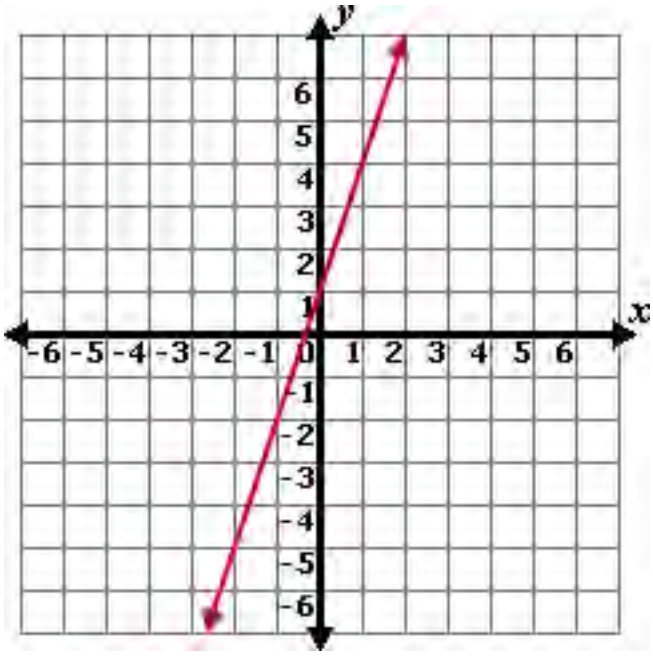
3. The line shown has a slope of $\frac{1}{2}$ between point J and point L and between point R and point T.



Which of the following best describes triangle JKL and triangle RST?

- **A.** The length of JL is equal to the length of RT.
- **B.** The length of JK is equal to the length of RS.
- **C.** Triangle JKL is congruent to triangle RST.
- **D.** Triangle JKL is similar to triangle RST.

4.



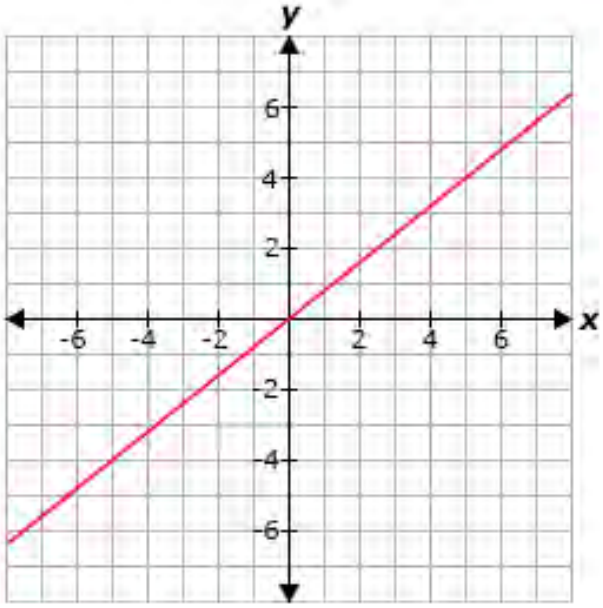
Which of the following equations matches the graph above?

- **A.** $y = \frac{1}{3}x - 1$
- **B.** $y = 3x - 1$
- **C.** $y = 3x + 1$
- **D.** $y = \frac{1}{3}x + 1$

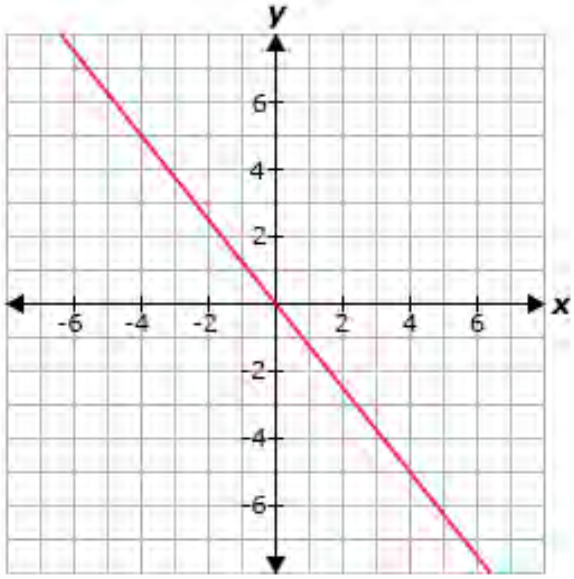
5.

$$y = \frac{4}{5}x$$

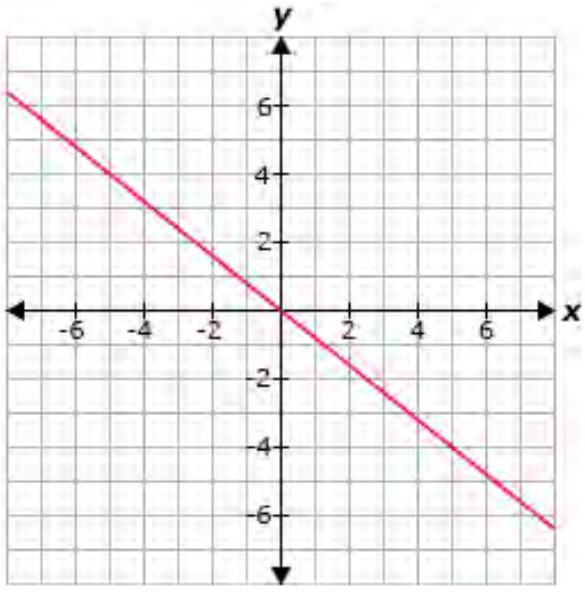
Which of the following graphs represents the equation above?



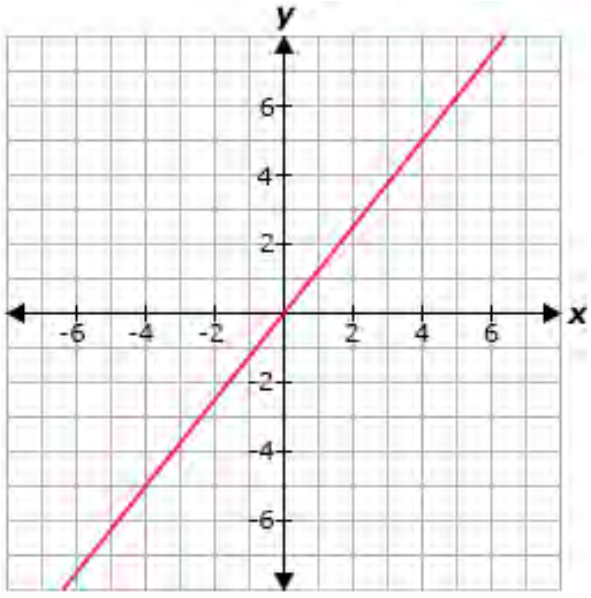
W.



X.



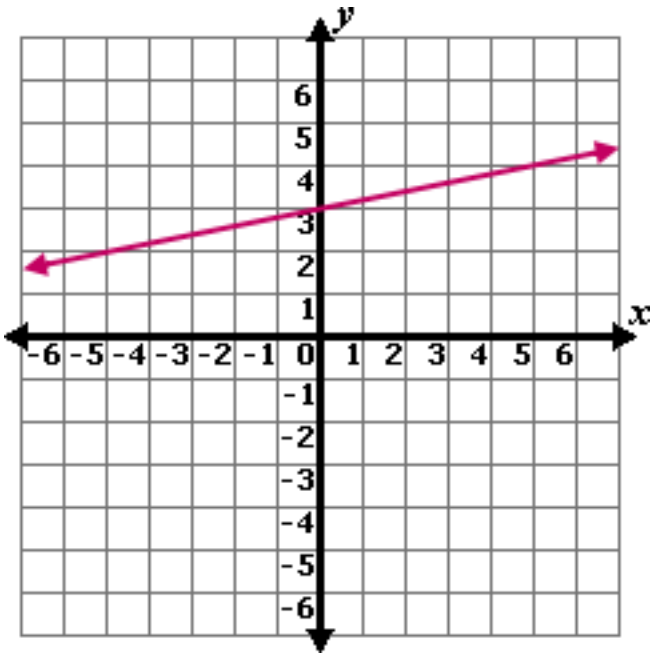
Y.



Z.

- **A.** X
- **B.** Z
- **C.** Y
- **D.** W

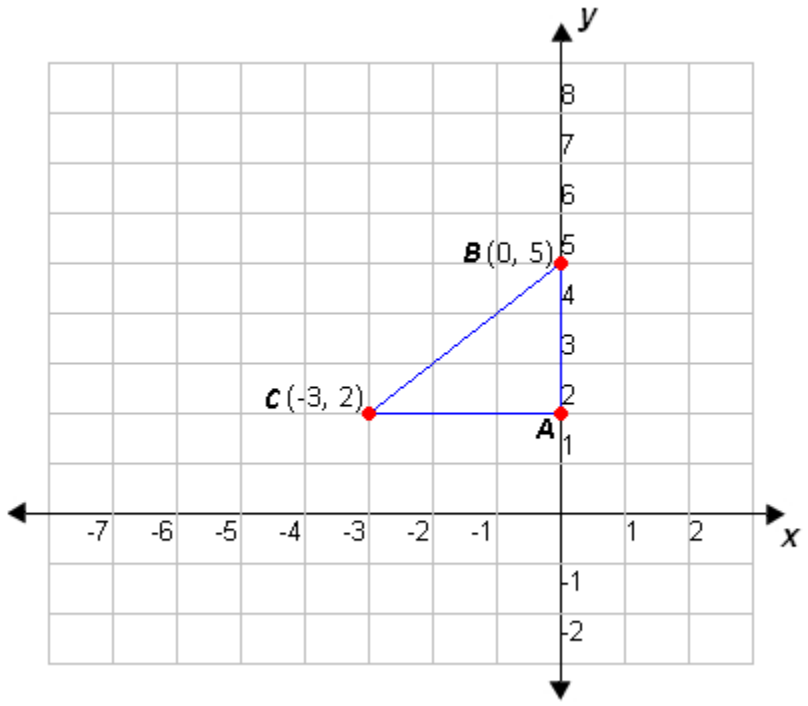
6.



Which of the following equations matches the graph above?

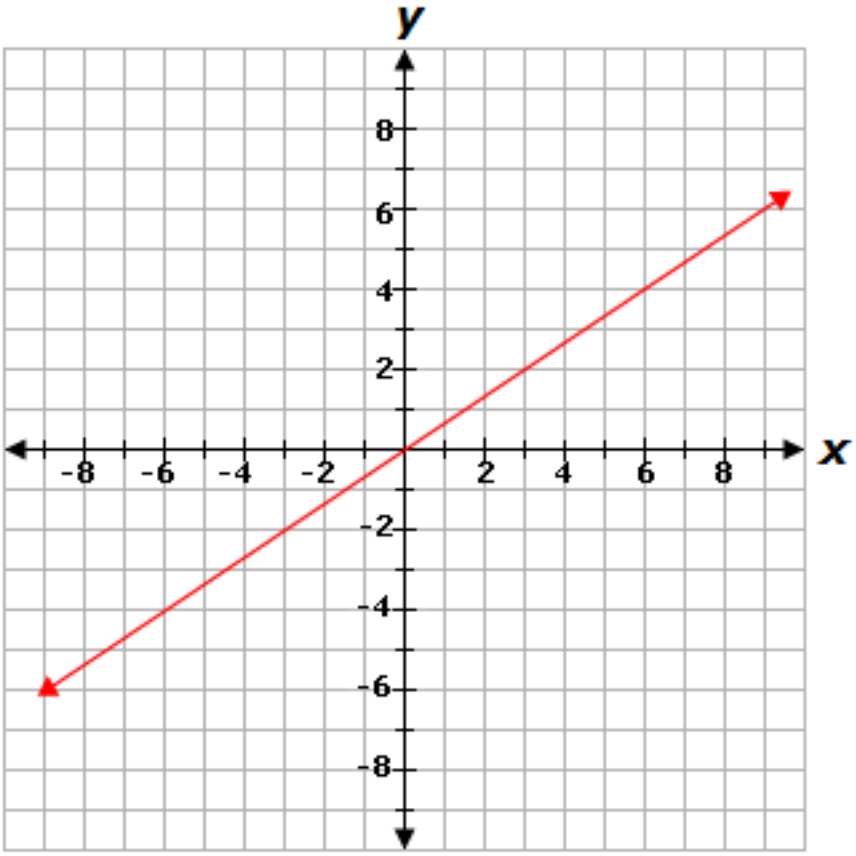
- **A.** $y = 5x - 3$
- **B.** $y = \frac{1}{5}x - 3$
- **C.** $y = \frac{1}{5}x + 3$
- **D.** $y = 5x + 3$

7. Right triangle *ABC* is shown on the graph below. If the point (-4, *y*) lies on the line that goes through side *BC* of the triangle, then what should be the value of *y*?



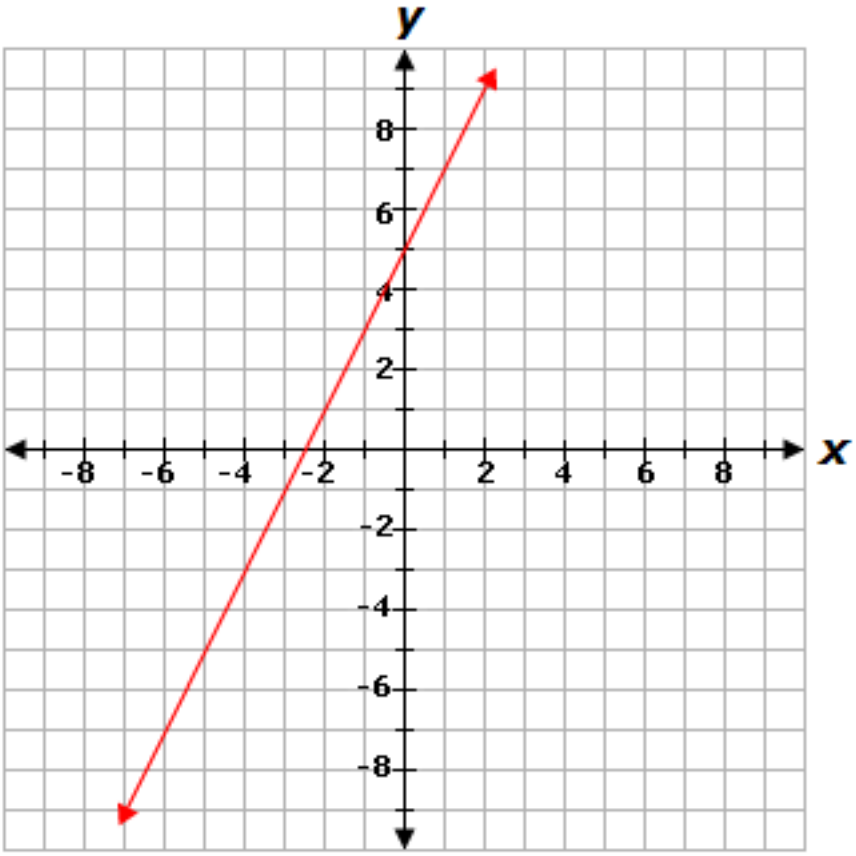
- **A.** -1
- **B.** -5
- **C.** 0
- **D.** 1

8. Which equation represents the line shown in the graph below?



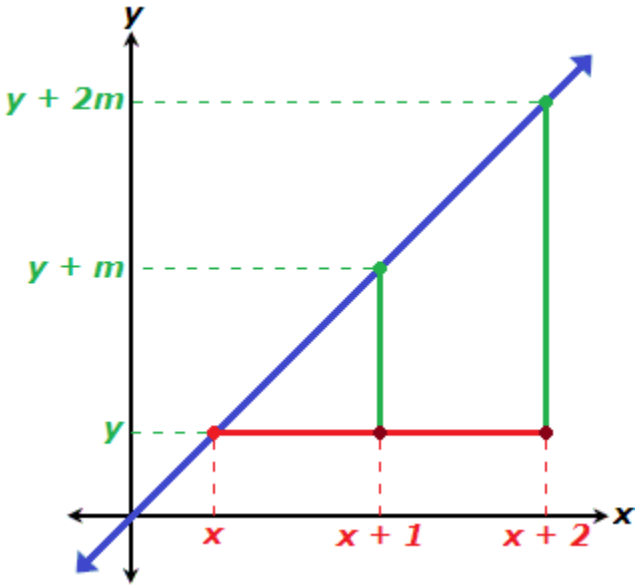
- A. $y = -\frac{3}{2}x$
- B. $y = \frac{3}{2}x$
- C. $y = \frac{2}{3}x$
- D. $y = -\frac{2}{3}x$

9. Which equation represents the line shown in the graph below?



- ○ **A.** $y = 5x + 2$
- ○ **B.** $y = 5x - 4$
- ○ **C.** $y = 2x + 5$
- ○ **D.** $y = 2x - 5$

10. What is the equation of the line graphed below?



- **A.** $y = mx$
- **B.** $y = mx + b$
- **C.** $y = \frac{m}{x + 1}$
- **D.** $y = m(x + 1)$

Answers: Graphs of Linear Equations

1. B
2. D
3. D
4. C
5. D
6. C
7. D
8. C
9. C
10. A

Explanations

1. Point F is at (-8, 4), and point H is at (-4, 0). So, the slope of the line between (-8, 4) and (-4, 0) is equal to the ratio of FG to GH.

Point J is at (-2, -2), and point L is at (5, -9). So, the slope of the line between (-2, -2) and (5, -9) is equal to the ratio of JK to KL.

Since the slope of the line between points F and H is equal to the slope of the line between points J and L, the ratio of FG to GH is equal to the ratio of JK to KL.

Therefore, the following is true.

$$\frac{\mathrm{FG}}{\mathrm{GH}} = \frac{\mathrm{JK}}{\mathrm{KL}}$$

2. Two triangles are similar if the slopes of corresponding sides are equal.

In triangle LKJ, LK is vertical, so the slope is undefined. The side KJ is horizontal, so the slope is zero.

Determine the slope of the JL using the slope formula. Point J is at (-6, -6), and point L is at (2, -2).

$$\begin{aligned}\text{slope} &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{-2 - (-6)}{2 - (-6)} \\ &= \frac{4}{8} \\ &= \frac{1}{2}\end{aligned}$$

In triangle TSR, TS is vertical, so the slope is undefined. The side SR is horizontal, so the slope is zero.

Determine the slope of the RT using the slope formula. Point R is at (4, -1), and point T is at (8, 1).

$$\begin{aligned}\text{slope} &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{1 - (-1)}{8 - 4} \\ &= \frac{2}{4} \\ &= \frac{1}{2}\end{aligned}$$

Compare the slopes of corresponding sides of the two triangles.

Sides LK and TS have undefined slopes.
Sides KJ and SR have zero slopes.
Sides JL and RT have slopes of $\frac{1}{2}$.

Therefore, the following statement is true.

The slope of JL is equal to the slope of RT.

3. The slope of the line between point J and point L is equal to the ratio of KL to JK.

The slope of the line between point R and point T is equal to the ratio of ST to RS.

Since the slope of the line between points J and L is equal to the slope of the line between points R and T, the ratio of KL to JK is equal to the ratio of ST to RS.

Two right triangles are similar if the ratios of two sets of their corresponding sides are congruent. Therefore, **triangle JKL is similar to triangle RST**.

4. The given equations are written in slope-intercept form,

$$y = mx + b$$

where m equals the slope and b equals the y-intercept.

The graph passes through points (0, 1) and (-1, -2). Use these points to find the slope, m, of the line.

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-2 - 1}{-1 - 0} = 3$$

The line passes through point (0, 1), so the y-intercept of the line is 1.

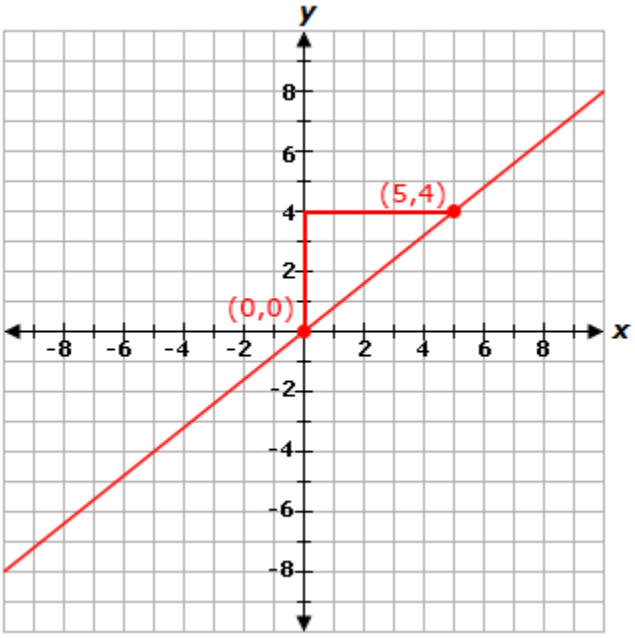
The slope of the line is 3, and the y-intercept is 1.

Therefore, the equation of the line is $\boldsymbol{y = 3x + 1}$.

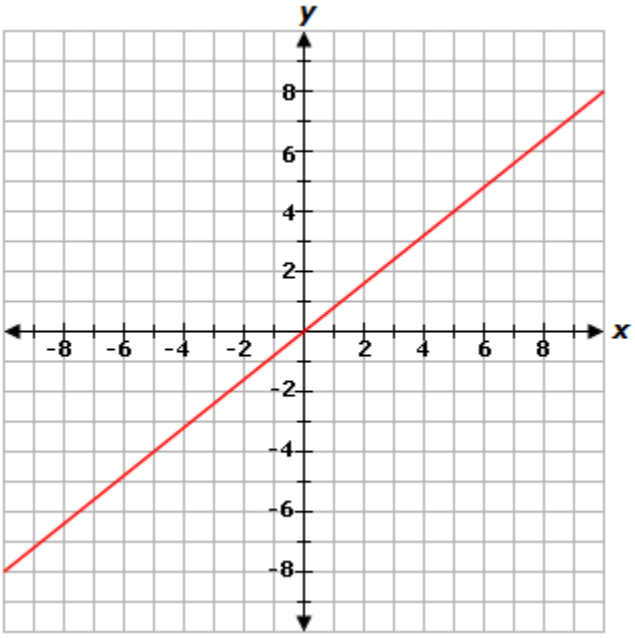
5. The equation of the line that passes through the origin is in the form $y = mx$, where m is the slope of the line.

The slope of a line, m, can be defined as the ratio between the change in y-coordinates (rise) and the change in x-coordinates (run), $\left(\frac{y}{x}\right)$.

In the given equation, $m = \frac{4}{5}$, so the rise is 4 places (y-direction) and run is 5 places (x-direction). Since the slope is positive, the line will go up from left to right, as shown below.



Therefore, the graph that represents the given equation is **W**.



6. The given equations are written in slope-intercept form,

$$y = mx + b$$

where *m* equals the slope and *b* equals the *y*-intercept.

The graph passes through points (0, 3) and (5, 4). Use these points to find the slope, *m*, of the line.

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - 3}{5 - 0} = \frac{1}{5}$$

The line passes through point (0, 3), so the *y*-intercept of the line is 3.

The slope of the line is $\frac{1}{5}$, and the *y*-intercept is 3.

Therefore, the equation of the line is $y = \frac{1}{5}x + 3$.

7. First, find the slope of side *BC*. Calculate the slope by finding the ratio of the difference between the *y*-coordinates and the difference between the *x*-coordinates of points *B* and *C*.

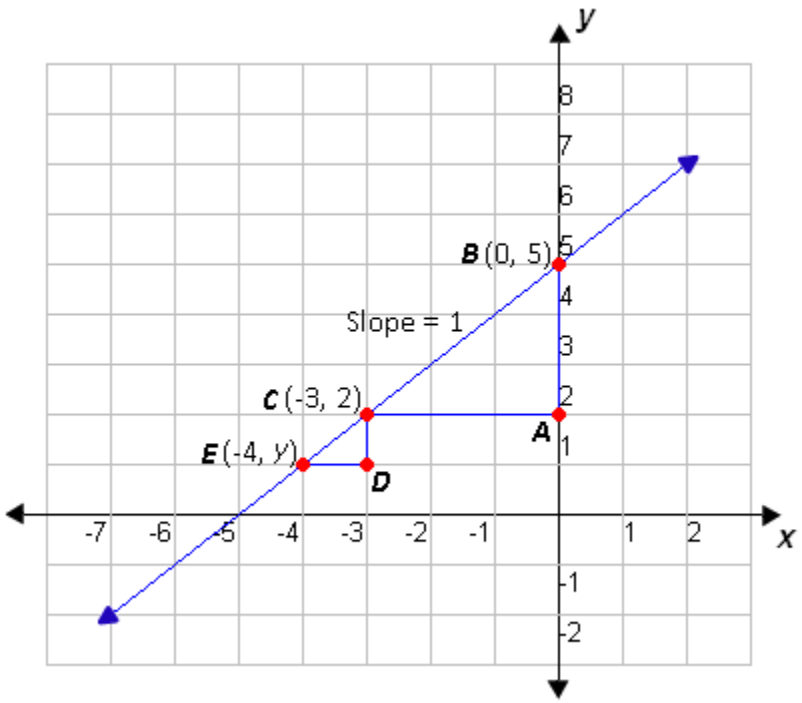
The slope of side *BC* can be found as shown below.

$$\text{Slope} = \frac{5 - 2}{0 - (-3)}$$

$$= \frac{3}{3}$$

$$= 1$$

Now, using the slope of side *BC*, draw a triangle *CDE* similar to the right triangle *ABC* with *E*(-4, *y*) as one vertex.



Next, find the value of *y* as shown below.

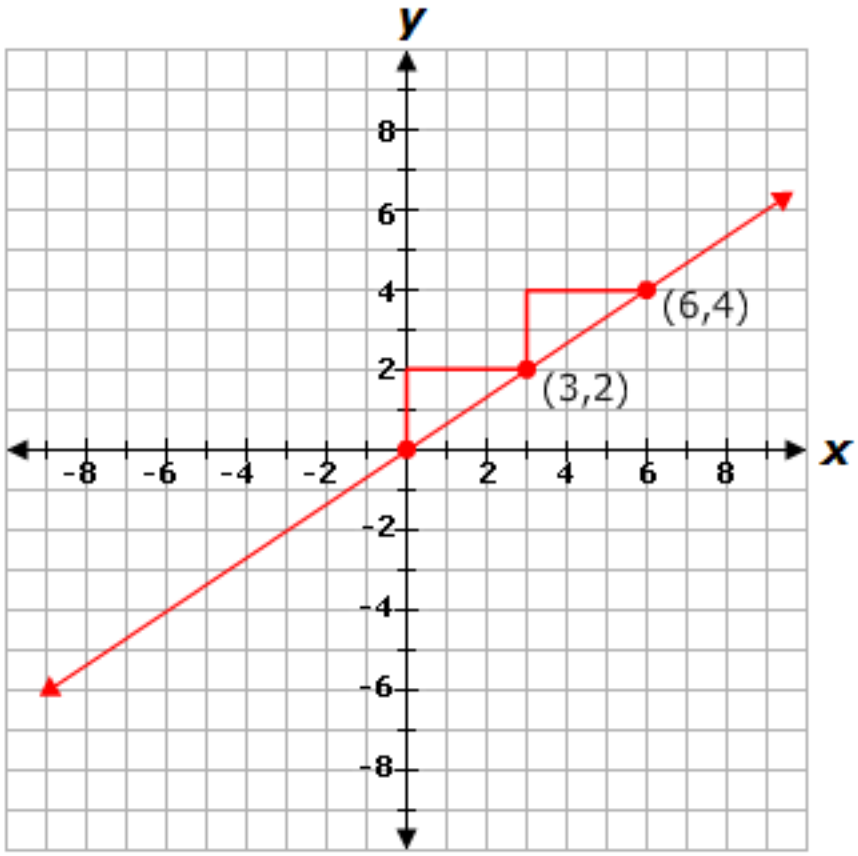
$$\frac{2 - y}{(-3) - (-4)} = 1$$

$$\frac{2 - y}{1} = 1$$

$$y = 1$$

Therefore, the value of *y* in the point (-4, *y*) is **1**.

8.



The equation of the line that passes through the origin is in the form $y = mx$, where m is the slope of the line.

Slope of a line, m, can be defined as the ratio between the change in y-coordinates (rise) and the change in x-coordinates (run), $\left(\frac{y}{x}\right)$.

In the diagram, both the triangles rise by 2 places (y) and run by 3 places (x). Since the line goes up from left to right, the slope is positive.

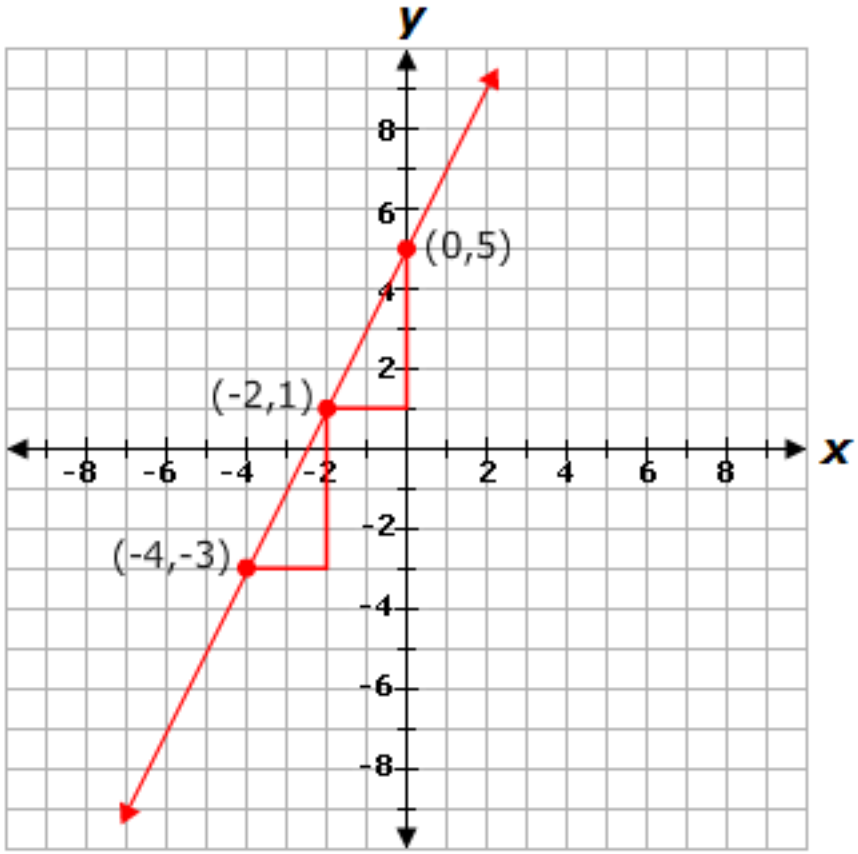
So, the slope of the line is $\frac{2}{3}$.

Substitute the value of *m* into the equation of a line passing through the origin.

So, the following equation represents the given line.

$$y = \frac{2}{3}x$$

9.



The slope intercept form of the equation of a line is $y = mx + b$, where *m* is the slope of the line and *b* is the *y*-intercept.

Slope of a line, *m*, can be defined as the ratio between the change in *y*-coordinates (rise) and the change in *x*-coordinates (run), $\left(\frac{y}{x}\right)$.

In the diagram, both the triangles rise by 4 places (*y*) and run by 2 places (*x*). Since the line goes up from left to right, the slope is positive.

So, the slope of the line is 2.

The *y*-intercept, *b*, is the value of the *y*-coordinate of the point where the line crosses the *y*-axis. The given line passes through the point (0,5). So, $b = 5$.

Substitute the values of *m* and *b* into the slope intercept form of the equation of a line.

So, the following equation represents the given line.

$$y = 2x + 5$$

10. First, look at the three points on the line. The coordinates of the points are (*x*, *y*), (*x* + 1, *y* + *m*), and (*x* + 2, *y* + 2*m*).

Each time *x* increases by 1, *y* increases by *m*. So, the slope of the line is $\frac{m}{1}$, or *m*.

The line passes through the point (0, 0). So, the *y*-intercept of the line is 0.

Therefore, the equation of the line is ***y = mx***.

Grade 8 Math: Create and Solve Systems of Equations

1. Mary is comparing the costs from two companies of having a banquet catered. Company M charges a base fee of $60 plus $12 per guest. Company N charges a base fee of $120 plus $9 per guest.

How many guests must be attending the banquet for the total cost to be the same for both companies?

- **A.** 60
- **B.** 20
- **C.** 180
- **D.** 300

---

2. Bo and Erica are yoga instructors. Between the two of them, they teach 30 yoga classes each week. If Erica teaches 15 fewer than twice as many as Bo, how many classes does each instructor teach per week?

- **A.** 17 Bo; 13 Erica
- **B.** 12 Bo; 18 Erica
- **C.** 15 Bo; 15 Erica
- **D.** 19 Bo; 11 Erica

---

3. Sara makes artificial flower bouquets and table arrangements and sells them at craft fairs.

Last weekend, she collected $283 from selling 8 bouquets and 6 table arrangements. The week before, she collected $491 from selling 10 bouquets and 12 table arrangements. What is the price of a table arrangement?

- **A.** $26.00
- **B.** $34.10
- **C.** $30.50
- **D.** $12.50

---

4. Line A passes through the points (0, 12) and $\left(-2\frac{1}{5}, 1\right)$.

Line B passes through the points (0, 11) and (1, 16).

Which of the following statements is true about the system of equations represented by line A and line B?

- **A.** The system of equations has no real solutions.
- **B.** The system of equations has an infinite number of real solutions.
- **C.** The system of equations has exactly two real solutions.
- **D.** The system of equations has exactly one real solution.

---

5. Line A has a slope of 3 and passes through the point (3, 18).

Line B has a slope of 3 and passes through the point (4, 21).

Which of the following statements is true about the system of equations represented by line A and line B?

- **A.** The system of equations has an infinite number of real solutions.
- **B.** The system of equations has exactly two real solutions.
- **C.** The system of equations has exactly one real solution.
- **D.** The system of equations has no real solutions.

---

6. The equation of line A is $y = 6x + 12$.

Line B is perpendicular to line A and passes through the point $\left(3, 11\frac{1}{2}\right)$.

What would be the solution to the system of equations represented by line A and line B?

- **A.** The system of equations has no real solutions.
- **B.** $x = 0, y = 12$
- **C.** The system of equations has an infinite number of real solutions.
- **D.** $x = 12, y = 0$

7. Marisol and her friend Kelly are participating in a fitness challenge.

At the start of the challenge, Marisol is able to complete 32 sit-ups and plans to increase the number of sit-ups she completes daily by 2. At the start of the challenge, Kelly is able to complete 28 sit-ups and plans to increase the number of sit-ups she completes daily by 3. Which system of equations can be used to determine the number of days it will take for both to complete the same number of daily sit-ups?

Let *x* represent the number of days and *y* represent the number of sit-ups completed daily.

○ **A.**
$$y = 2x + 32$$
$$y = 3x + 28$$

○ **B.**
$$32 = 2x + y$$
$$28 = 3x + y$$

○ **C.**
$$32 = 3x + y$$
$$28 = 2x + y$$

○ **D.**
$$y = 2x + 28$$
$$y = 3x + 32$$

---

8. The difference of the product of -12 and *x* and the product of 3 and *y* is -9. The sum of the product of 4 and *x* and *y* is 3.

What are the values of *x* and *y*?

○ **A.** There are infinitely many solutions.

○ **B.** There is no solution.

○ **C.** $x = 0, y = 0$

○ **D.** $x = -12, y = -9$

9. Terri and Kay are stocking cereal boxes in a middle aisle for a store display.

Together, they stocked 60 cereal boxes on the display. Kay stocked 8 more than $\frac{1}{3}$ of the boxes that Terri stocked. Which system of equations can be used to determine the number of cereal boxes Terri stocked and the number of cereal boxes Kay stocked for the store display?

Let *x* represent the number of boxes Terri stocked and *y* represent the number of boxes Kay stocked.

○ **A.**
$$x + y = 8$$
$$60 = \frac{1}{3}x + y$$

○ **B.**
$$y = x + 60$$
$$y = 8x + \frac{1}{3}$$

○ **C.**
$$x + y = 60$$
$$y = \frac{1}{3}x + 8$$

○ **D.**
$$x + y = 60$$
$$y = 8x + \frac{1}{3}$$

---

10. Mega Movies hosted a film premiere on Friday night. They charged $9 for adults and $4 for children. One hundred thirty-five adults and children attended, and $1,075 was made in ticket sales. How many children and how many adults went to the film premiere?

○ **A.** 22 children; 113 adults

○ **B.** 32 children; 103 adults

○ **C.** 25 children; 110 adults

○ **D.** 28 children; 107 adults

Answers

1. B
2. C
3. C
4. A
5. A
6. B
7. A
8. A
9. C
10. D

Explanations

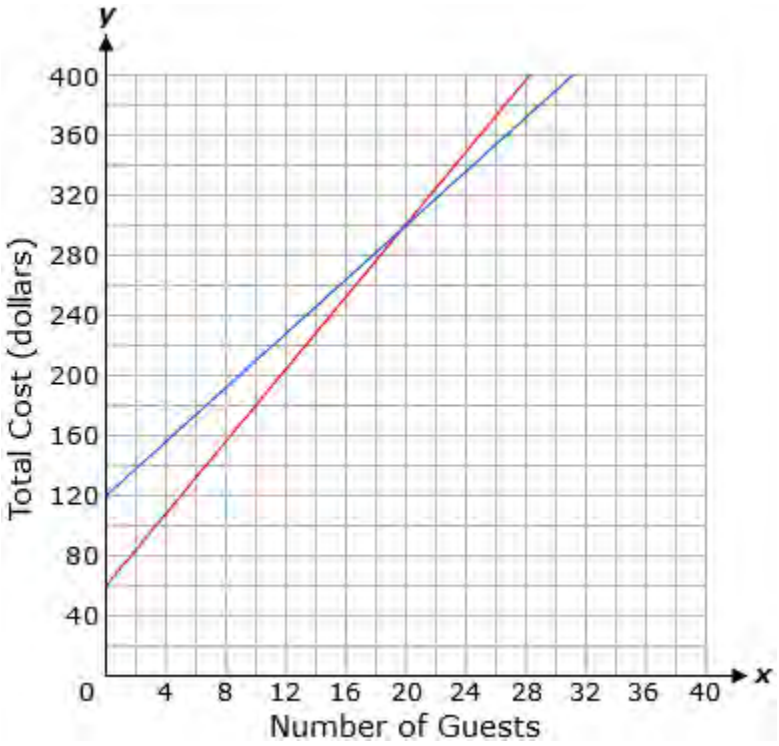
1. First, use a system of linear equations to represent the total cost of catering the banquet, *y*, for each company when *x* guests are attending.

Since company M charges a base fee of $60 plus $12 per guest while company N charges a base fee of $120 plus $9 per guest, the given equations represent the total cost, in dollars, for each company.

$$y = 12x + 60$$

$$y = 9x + 120$$

Now, graph the given system of equations.



The point where the two lines intersect satisfies both equations simultaneously. So, the solution to the system is given by the point of intersection.

To determine how many guests must be attending for the total cost of catering the banquet to be the same for both companies, find the point of intersection between the two lines, which is (20,300).

Since x represents the number of guests, identify the x-coordinate of the point, which is 20.

Therefore, **20** guests must be attending the banquet for the total cost to be the same for both companies.

2. Develop two equations from the given information.

Let b equal the number of classes Bo teaches and e equal the number of classes Erica teaches.

$$b + e = 30$$
$$2b - 15 = e$$

Substitute the e equation into the other equation.

$$b + (2b - 15) = 30$$
$$3b - 15 = 30$$
$$3b = 45$$
$$b = 15$$

Now use the value for b to solve for e.

$$2b - 15 = e$$
$$2(15) - 15 = e$$
$$30 - 15 = e$$
$$15 = e$$

Therefore, **15** classes are taught by **Bo** and **15** classes are taught by **Erica**.

3. Develop two equations from the given information.

Let b equal the price, in dollars, of a bouquet and t equal the price, in dollars, of a table arrangement.

$$8b + 6t = 283$$
$$10b + 12t = 491$$

Use elimination to solve the system of equations and find the price of each item.

First, rewrite one of the given equations so that it can be combined with the other equation to eliminate a variable. To do this, multiply the first equation by -2.

$$\begin{aligned} -2(8b + 6t) = -2(283) \quad &\rightarrow \quad -16b - 12t = -566 \\ 10b + 12t = 491 \quad &\rightarrow \quad 10b + 12t = 491 \end{aligned}$$

Now, add the two equations together and eliminate the *t* term.

$$\begin{aligned} -16b - 12t &= -566 \\ 10b + 12t &= 491 \\ \hline -6b &= -75 \\ b &= 12.5 \end{aligned}$$

So, the price of a bouquet is $12.50.

Now, substitute 12.5 for *b* in one of the equations and solve for *t*.

$$\begin{aligned} 10(12.5) + 12t &= 491 \\ 125 + 12t &= 491 \\ 12t &= 366 \\ t &= 30.5 \end{aligned}$$

So, the price of a table arrangement is **$30.50**.

4. First, find the slope of line A.

$$\begin{aligned} m &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{1 - (12)}{-2\frac{1}{5} - 0} \\ &= \frac{-11}{-\frac{11}{5}} \\ &= 5 \end{aligned}$$

Then, find the *y*-intercept of line A by substituting the slope of line A and a point line A passes through into the slope-intercept equation.

$$\begin{aligned} y &= mx + b \\ 12 &= 5(0) + b \\ 12 &= b \end{aligned}$$

So, the equation of line A is $y = 5x + 12$.

Next, find the slope of line B.

$$\begin{aligned} m &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{16 - (11)}{1 - 0} \\ &= \frac{5}{1} \\ &= 5 \end{aligned}$$

Then, find the *y*-intercept of line B by substituting the slope of line B and a point line B passes through into the slope-intercept equation.

$$\begin{aligned} y &= mx + b \\ 11 &= 5(0) + b \\ 11 &= b \end{aligned}$$

So, the equation of line B is $y = 5x + 11$.

The equation for line A is $5x - y = -12$, and the equation for line B is $5x - y = -11$.

Since $5x - y$ cannot equal both -12 and -11 at the same time, **the system of equations has no real solutions**.

5. First, find the *y*-intercept of line A by substituting the slope and the point on the line into the slope-intercept equation.

$$\begin{aligned} y &= mx + b \\ 18 &= 3(3) + b \\ 18 &= 9 + b \\ 18 - 9 &= b \\ 9 &= b \end{aligned}$$

So, the equation of line A is $y = 3x + 9$.

Next, find the *y*-intercept of line B by substituting the slope and the point on the line into the slope-intercept equation.

$$y = mx + b$$
$$21 = 3(4) + b$$
$$21 = 12 + b$$
$$21 - 12 = b$$
$$9 = b$$

So, the equation of line B is $y = 3x + 9$.

Because the equations of line A and line B are the same, the graphs of both equations are the same.

Therefore, **the system of equations has an infinite number of real solutions.**

6. It is given that line B is perpendicular to line A. So, the slope of line B is the negative reciprocal of the slope of line A.

The slope of line A is 6. So, the slope of line B is $-\frac{1}{6}$.

Find the *y*-intercept of line B by substituting the slope of line B and the point line B passes through into the slope-intercept equation.

$$y = mx + b$$
$$11\frac{1}{2} = -\frac{1}{6}(3) + b$$
$$\frac{23}{2} = -\frac{1}{2} + b$$
$$\frac{23}{2} - (-\frac{1}{2}) = b$$
$$12 = b$$

So, the equation of line B is $y = -\frac{1}{6}x + 12$.

Now, set the equation of line A and line B equal to each other, and solve for *x*.

$$6x + 12 = -\frac{1}{6}x + 12$$

$$6x = -\frac{1}{6}x$$

$$-36x = x$$

$$x = 0$$

Finally, substitute *x* = 0 into the equation for line A, and solve for *y*.

$$y = 6(0) + 12$$

$$y = 12$$

So, the solution to the system of equations represented by line A and line B is given below.

$$x = 0, y = 12$$

7. Write each equation where *x* represents the number of days and *y* represents the number of sit-ups completed daily.

At the start of the challenge, Marisol is able to complete 32 sit-ups and plans to increase the number of sit-ups she completes daily by 2.

$$y = 2x + 32$$

At the start of the challenge, Kelly is able to complete 28 sit-ups and plans to increase the number of sit-ups she completes daily by 3.

$$y = 3x + 28$$

Since *x* and *y* must satisfy both equations, write the two equations together as a system of equations. This system can be used to determine the number of days it takes for both to complete the same number of daily sit-ups.

$$y = 2x + 32$$

$$y = 3x + 28$$

8. First, set up a system of equations.

The difference of the product of -12 and *x* and the product of 3 and *y* is -9.

$$-12x - 3y = -9$$

The sum of the product of 4 and *x* and *y* is 3.

$$4x + y = 3$$

Next, use substitution to solve for *x* and *y*. Solve the second equation for *y*.

$$4x + y = 3$$
$$y = 3 - 4x$$

Now, substitute the expression (3 − 4*x*) for *y* in the first equation, and solve for *x*.

$$-12x - 3(3 - 4x) = -9$$
$$-12x - 9 + 12x = -9$$
$$-9 = -9$$

Since the solution is in the form *a* = *a*, this means any value for *x* and *y* will make the system of equations true.

So, **there are infinitely many solutions.**

9. Write each equation where *x* represents the number of boxes Terri stocked and *y* represents the number of boxes Kay stocked.

Together, they stocked 60 cereal boxes on the display.

$$x + y = 60$$

Kay stocked 8 more than $\frac{1}{3}$ of the boxes that Terri stocked.

$$y = \frac{1}{3}x + 8$$

Since *x* and *y* must satisfy both equations, write the two equations together as a system of equations. This system can be used to determine the number of cereal boxes stocked by Terri and the number of cereal boxes stocked by Kay for the store display.

$$x + y = 60$$
$$y = \frac{1}{3}x + 8$$

10. Develop two equations from the given information.

Let *a* equal the number of adults and *c* equal the number of children.

$$a + c = 135$$
$$9a + 4c = 1{,}075$$

Solve for one of the variables in one of the equations.

$$a + c = 135$$
$$c = 135 - a$$

Substitute that equation for c into the other equation.

$$\begin{aligned} 9a + 4c &= 1{,}075 \\ 9a + 4(135 - a) &= 1{,}075 \\ 9a + 540 - 4a &= 1{,}075 \\ 5a + 540 &= 1{,}075 \\ 5a &= 535 \\ a &= 107 \end{aligned}$$

Now use the value for a to solve for c.

$$\begin{aligned} c &= 135 - a \\ c &= 135 - 107 \\ c &= 28 \end{aligned}$$

Therefore, **28 children** and **107 adults** went to the film premiere.

Grade 8 Math: Linear vs. Nonlinear Functions

1. Which of the following is a nonlinear function?

- **A.** The items at a clothing store are sold at a discount of 20% off the original price.
- **B.** The number of dogs in a town increases by 20 per neighborhood per year.
- **C.** A soccer manufacturing company spends $5 on each soccer ball.
- **D.** The number of students enrolling at a high school increases each year by a factor of 1.25.

---

2. Which of the following best describes the equation below?

$$y = 4x^3 + 6$$

- **A.** neither linear nor nonlinear
- **B.** both linear and nonlinear
- **C.** linear
- **D.** nonlinear

---

3. Which of the following best describes the equation below?

$$y = \frac{x}{10} + 10^3$$

- **A.** linear
- **B.** neither linear nor nonlinear
- **C.** both linear and nonlinear
- **D.** nonlinear

4.

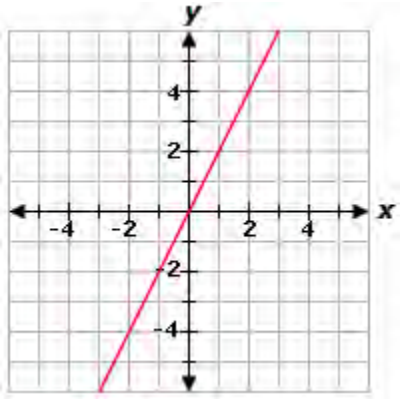
x	*y*
1	3
2	6
3	9
4	12
5	15

The table above represents what type of function?

- **A.** neither linear nor nonlinear
- **B.** linear and nonlinear
- **C.** linear
- **D.** nonlinear

---

5. Which of the following statements correctly describes the graph?



- **A.** The graph represents a nonlinear function with an increasing rate of change.
- **B.** The graph represents a linear function with an increasing rate of change.
- **C.** The graph represents a linear function with a constant rate of change.
- **D.** The graph represents a nonlinear function with a constant rate of change.

6. Select the correct statement.

- **A.** Both linear and nonlinear functions have a constant rate of change.
- **B.** Both linear and nonlinear functions do not have a constant rate of change.
- **C.** Nonlinear functions have a constant rate of change, while linear functions do not have a constant rate of change.
- **D.** Linear functions have a constant rate of change, while nonlinear functions do not have a constant rate of change.

---

7. Which of the following is a nonlinear function?

- **A.**

Input	1	2	3	4	5
Output	4	16	64	256	1,024

- **B.**

Input	1	2	3	4	5
Output	4	10	16	22	28

- **C.**

Input	1	2	3	4	5
Output	4	12	20	28	36

- **D.**

Input	1	2	3	4	5
Output	4	8	12	16	20

---

8. A factory that manufactures basketballs spends $4 on each basketball that it produces.

Which of the following describes the rate of cost growth at the factory?

- **A.** nonlinear
- **B.** neither linear nor nonlinear
- **C.** linear
- **D.** both linear and nonlinear

---

9. Which of the following is a nonlinear function?

- **A.** Molly has $200 in savings. She decided to save $45 each month going forward.
- **B.** Desmond owns a gaming store where the average number of daily customers increases by 100 each month.
- **C.** Jeremy has 10 comic books and he buys 2 comic books every month.
- **D.** The annual revenue of an IT firm has been decreasing by 2% per year.

10. Which of the following best describes the equation below?

$$y = -2x^3 - 12$$

- **A.** linear
- **B.** both linear and nonlinear
- **C.** nonlinear
- **D.** neither linear nor nonlinear

Answers: Linear vs. Nonlinear Functions

1. D
2. D
3. A
4. C
5. C
6. D
7. A
8. C
9. D
10. C

Explanations

1. A linear function increases at a constant rate, while a nonlinear function increases at a variable rate.

The number of students does not change at a constant rate. Each year, the increase in the number is 1.25 times the increase that occurred during the previous year.

So, the nonlinear function is **the number of students enrolling at a high school increases each year by a factor of 1.25.**

2. An equation is linear if it can be written in the form $y = mx + b$.

An equation is nonlinear if its graph contains points which are not on a straight line.

The graph of the given equation contains the points (1, 10), (2, 38), and (3, 114). These points do not form a straight line.

Therefore, the equation is **nonlinear**.

3. An equation is linear if it can be written in the form $y = mx + b$.

An equation is nonlinear if its graph contains points which are not on a straight line.

The given equation is written in the form $y = mx + b$. In this case, $m = \frac{1}{10}$ and $b = 10^3 = 1{,}000$.

Therefore, the equation is **linear**.

4. In a **linear** function, numbers increase at a constant rate.

Each number in the y column is three more than the previous number. The numbers are 3(1), 3(2), 3(3), 3(4), and 3(5).

So, the numbers are given by the linear equation $y = 3x$.

5. The graph of a linear function has a constant rate of change, or slope. This means that for any two points that lie on the line that represents the function, the slope is the same. To calculate the slope of a function, divide the difference in the *y*-values by the difference in the *x*-values.

Choose three points that lie on the graph of the function.

x	***y***
0	0
1	2
2	4

The difference between two consecutive *x*-values in the table is constant, 1, and the difference between two consecutive *y*-values is also constant, 2. Therefore, the rate of change is constant.

So, **the graph represents a linear function with a constant rate of change.**

6. In a linear function, the values change at a constant rate. As a result, the graphs of linear functions are straight lines.

In a nonlinear function, the values do not change at a constant rate. As a result, the graphs of nonlinear functions are not straight lines.

So, the correct statement is shown below.

Linear functions have a constant rate of change, while nonlinear functions do not have a constant rate of change.

7. In a linear function, when input values have a constant rate of change, the output values also have a constant rate of change.

In a non-linear function, when input values have a constant rate of change, the output values will not have a constant rate of change.

The only table in which the output values do not increase at a constant rate is shown below.

Input (*x*)	1	2	3	4	5
Output (*y*)	4	16	64	256	1,024
Change in Output		12	48	192	768

8. Linear growth is growth at a constant rate.

Nonlinear growth is growth at a changing rate.

In this case, the rate of cost growth for the factory is constant because each basketball produced adds a fixed amount to the total cost of the factory.

So, this is a constant, or **linear**, rate of growth.

9. A linear function increases at a constant rate, while a nonlinear function increases at a variable rate.

The annual revenue of the IT firm does not change at a constant rate. Every year, the decrease in revenue is 2% less than the decrease from the previous year.

So, the nonlinear function is **the annual revenue of an IT firm has been decreasing by 2% per year.**

10. An equation is linear if it can be written in the form $y = mx + b$.

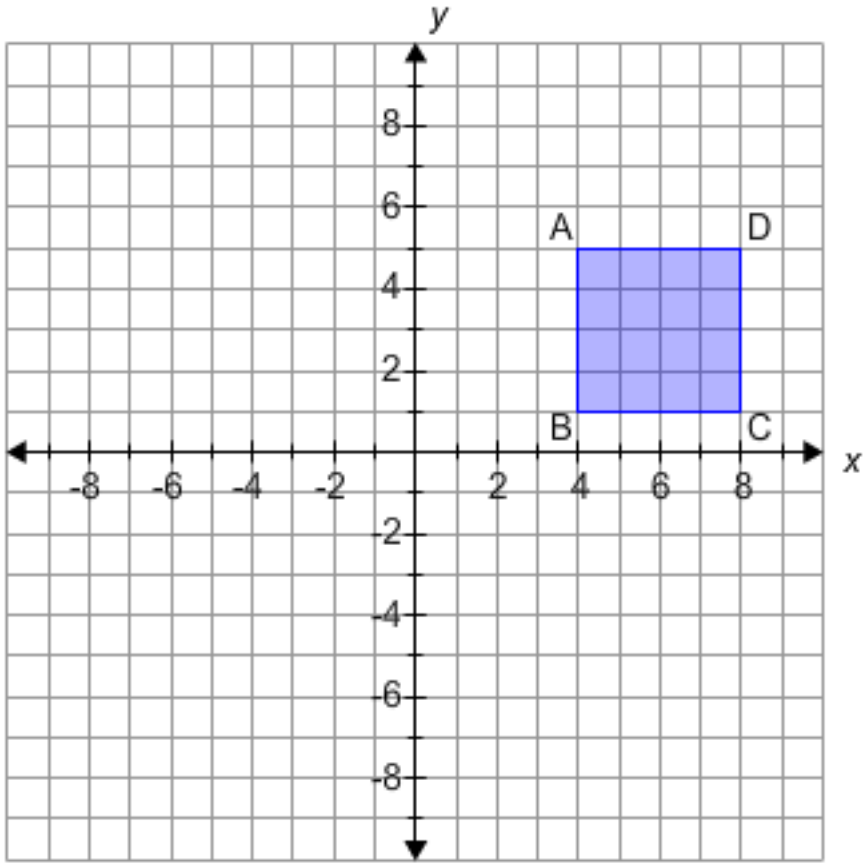
An equation is nonlinear if its graph contains points which are not on a straight line.

The graph of the given equation contains the points (1, -14), (2, -28), and (3, -66). These points do not form a straight line.

Therefore, the equation is **nonlinear**.

Grade 8 Math: Properties of Transformations

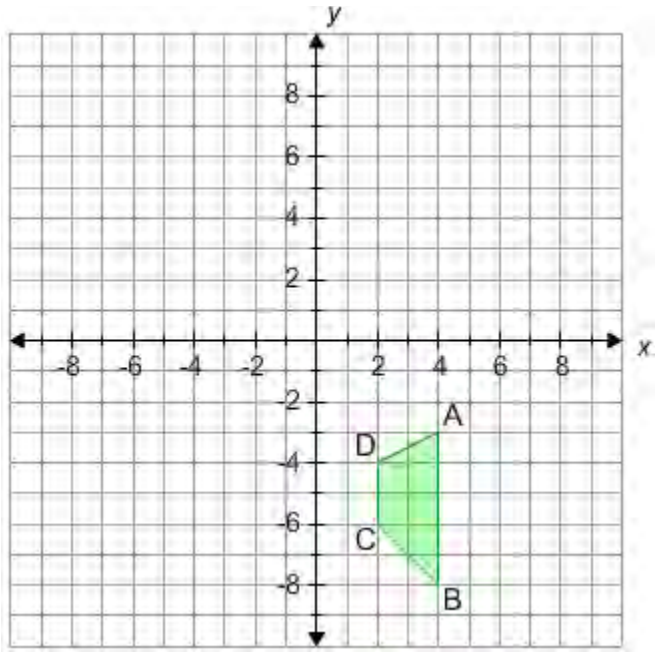
1. Square ABCD is shown below. It has an area of 16 square units.



If square ABCD is translated 10 units to the left to create square A'B'C'D', what is the area of the resulting image?

- **A.** 16 square units
- **B.** 20 square units
- **C.** 8 square units
- **D.** 12 square units

2. Trapezoid ABCD is shown below.

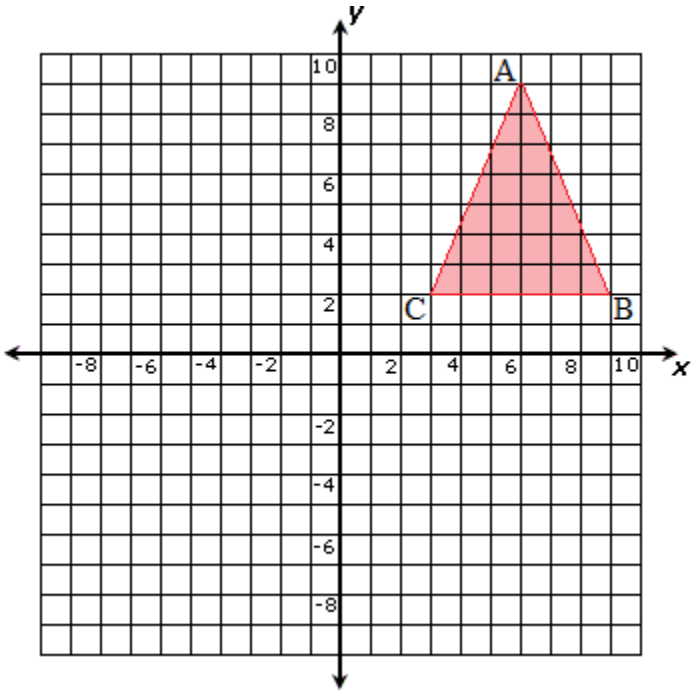


If trapezoid ABCD is rotated 90° clockwise about the origin to create trapezoid A'B'C'D', which set of sides would be parallel in the resulting image?

I. A'B' and B'C'
II. D'A' and C'B'
III. A'B' and D'C'
IV. A'B' and D'A'

- **A.** II and IV only
- **B.** II only
- **C.** I and III only
- **D.** III only

3. In triangle ABC, shown below, angle A measures 46.4°, and angle B measures 66.8°.



Note: triangle is not drawn to scale

If triangle ABC were reflected across the *x*-axis to create triangle A'B'C', what would the measure of angle C' be?

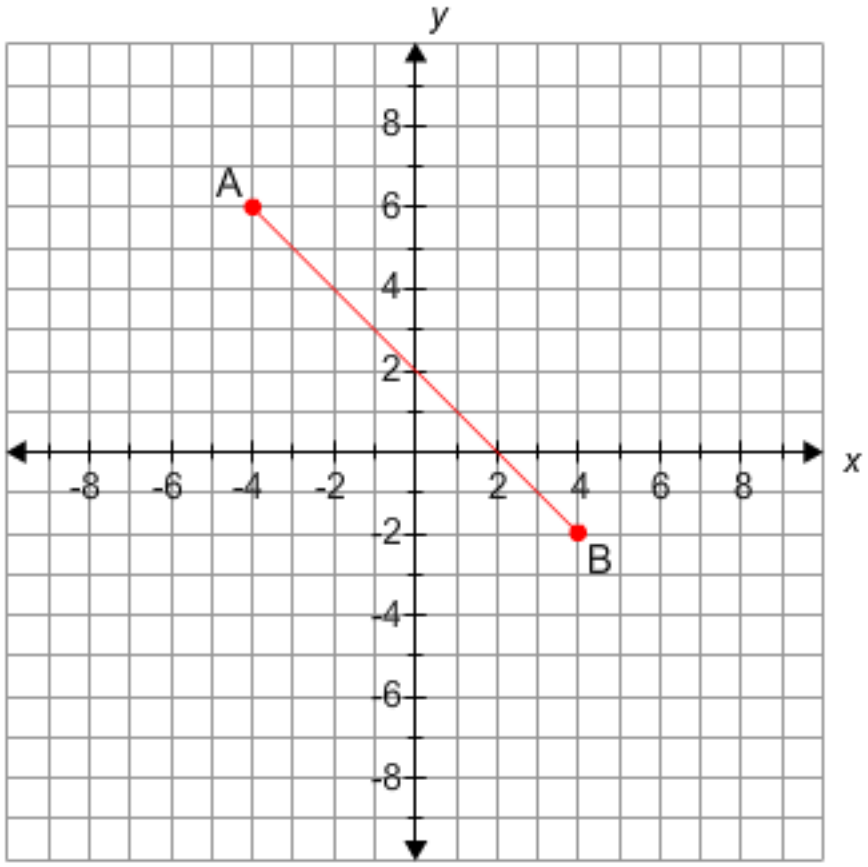
- **A.** 66.8°
- **B.** 180°
- **C.** 113.2°
- **D.** 46.4°

---

4. Which of the following statements is true of all reflections?

- **A.** all angle measures decrease
- **B.** all vertex positions remain the same
- **C.** all side positions remain the same
- **D.** all angle measures remain the same

5. The line segment AB is shown below.



If line segment AB were translated 2 units down and 3 units to the right to create line segment A'B', what would the end points of the new line segment be?

- **A.** (2,5) and (-6,3)
- **B.** (-1,4) and (7,-4)
- **C.** (1,4) and (-7,4)
- **D.** (-2,5) and (6,-3)

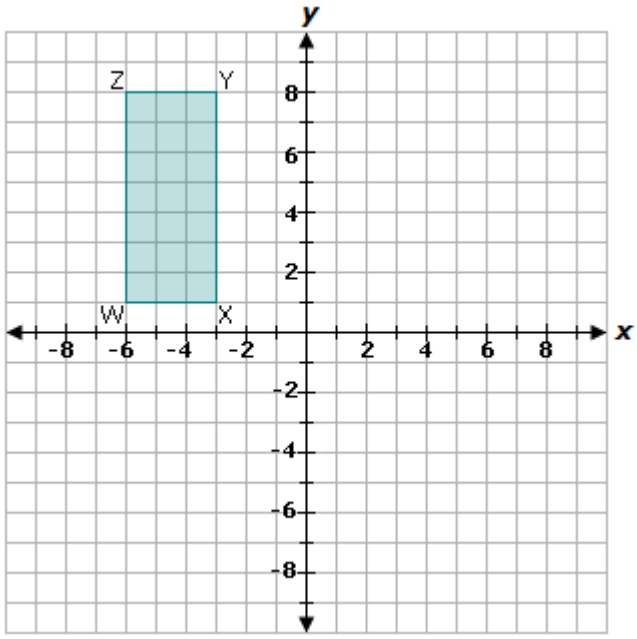
---

6. Side measures are preserved in which of the following types of transformations?

I. rotations
II. reflections
III. translations

- **A.** I and II only
- **B.** I, II, and III
- **C.** I and III only
- **D.** I only

7. Rectangle WXYZ is shown on the graph.



If rectangle WXYZ is rotated 90° clockwise about the origin, what is the perimeter of the resulting image?

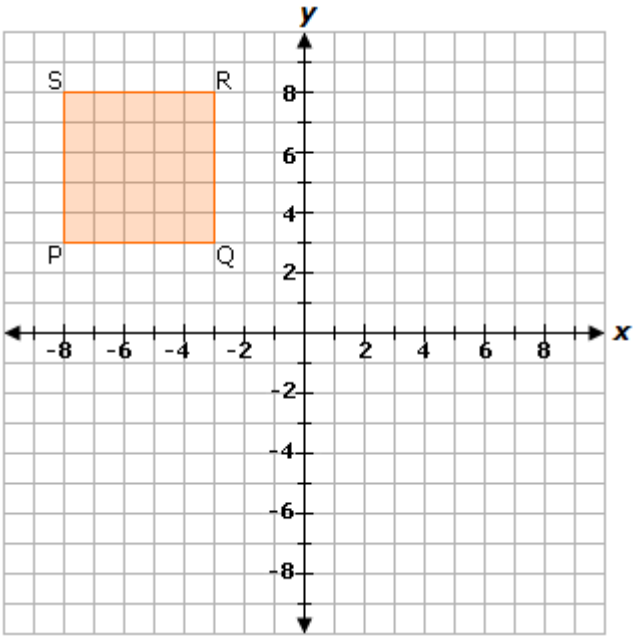
- **A.** 18 units
- **B.** 10 units
- **C.** 21 units
- **D.** 20 units

---

8. Rick is wearing his favorite math t-shirt. The picture on the front of his shirt shows a right triangle with a hypotenuse of 13 inches. Looking in the mirror, Rick notices the reflection of his shirt. What is the length of the hypotenuse of the triangle in the mirror?

- **A.** 26 inches
- **B.** 6.5 inches
- **C.** 13 inches
- **D.** 19.5 inches

9. Square PQRS is shown on the graph.



If square PQRS is reflected across the *x*-axis to create square P'Q'R'S', what is the perimeter of the resulting image?

- **A.** 36 units
- **B.** 25 units
- **C.** 10 units
- **D.** 20 units

---

10. Which of the following statements is true of all translations?

- **A.** all corresponding sides in a figure and its translation are parallel or lie on the same line
- **B.** all side positions remain the same
- **C.** all corresponding vertex positions in a figure and its translation remain the same
- **D.** all angle measures increase

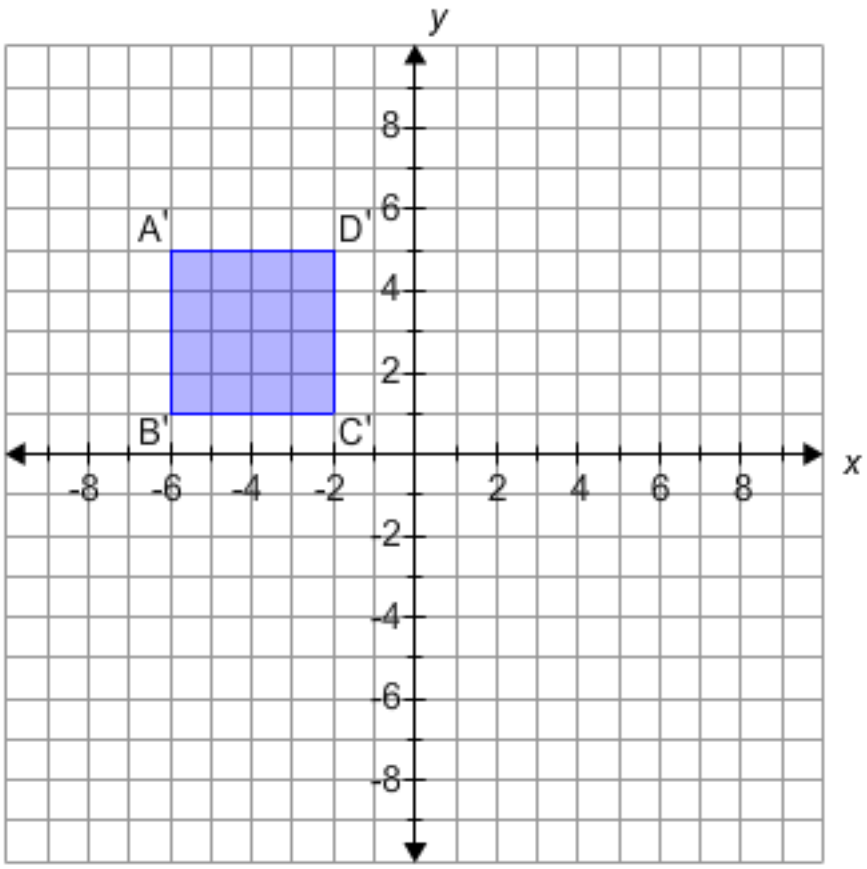
Answers: Properties of Transformations

1. A
2. D
3. A
4. D
5. B
6. B
7. D
8. C
9. D
10. A

Explanations

1. A translation is a transformation that "slides" a figure in any direction.

Slide the square 10 units to the left.

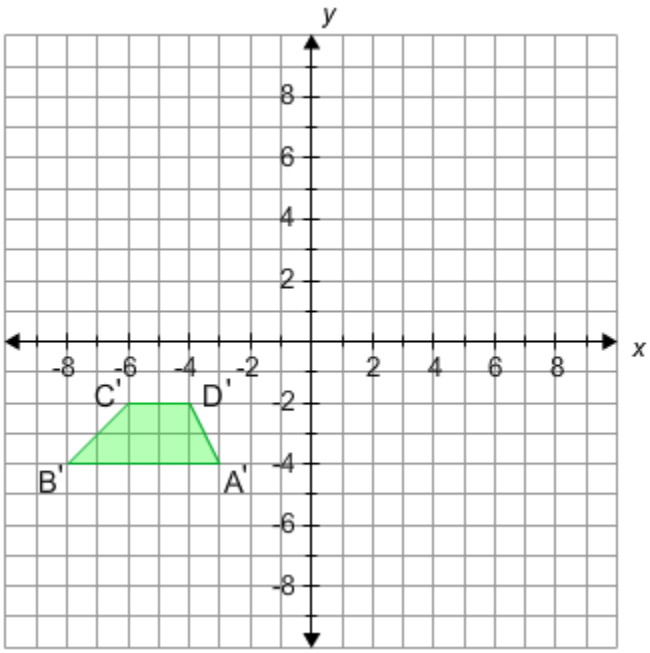


The resulting image has all the same angles and side measures as the original figure.

Therefore, the area of square A'B'C'D' is same as the area of square ABCD, or **16 square units**.

2. A rotation is a transformation in which the figure rotates around a fixed point. In this case, the point of rotation is the origin.

Rotate the trapezoid 90° clockwise about the origin.

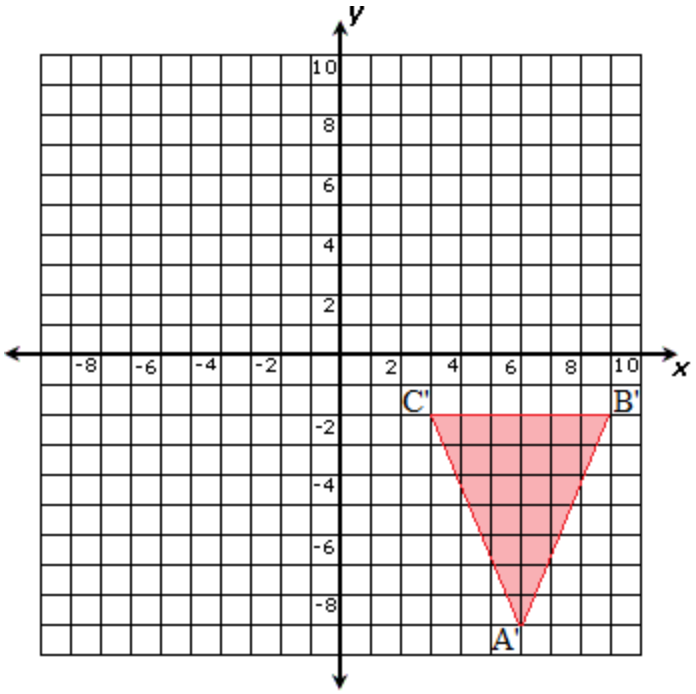


The resulting image has all the same angles and side measures as the original figure. Since the sides AB and DC are parallel in trapezoid ABCD, sides A'B' and D'C' would be parallel in the resulting image.

Therefore, the set of sides in **III only**, or A'B' and D'C' would be parallel in the resulting image.

3. A reflection is a transformation in which a figure flips over a line of reflection to create a mirror image. In this case, the line of reflection is the *x*-axis.

Reflect triangle ABC across the *x*-axis.



Notice that the mirror image has all the same angle and side measures as the original figure. Thus, the measure of angle C' will be the same as the measure of angle C. Use the fact that the sum of the interior angles of a triangle is 180° to find the measure of angle C.

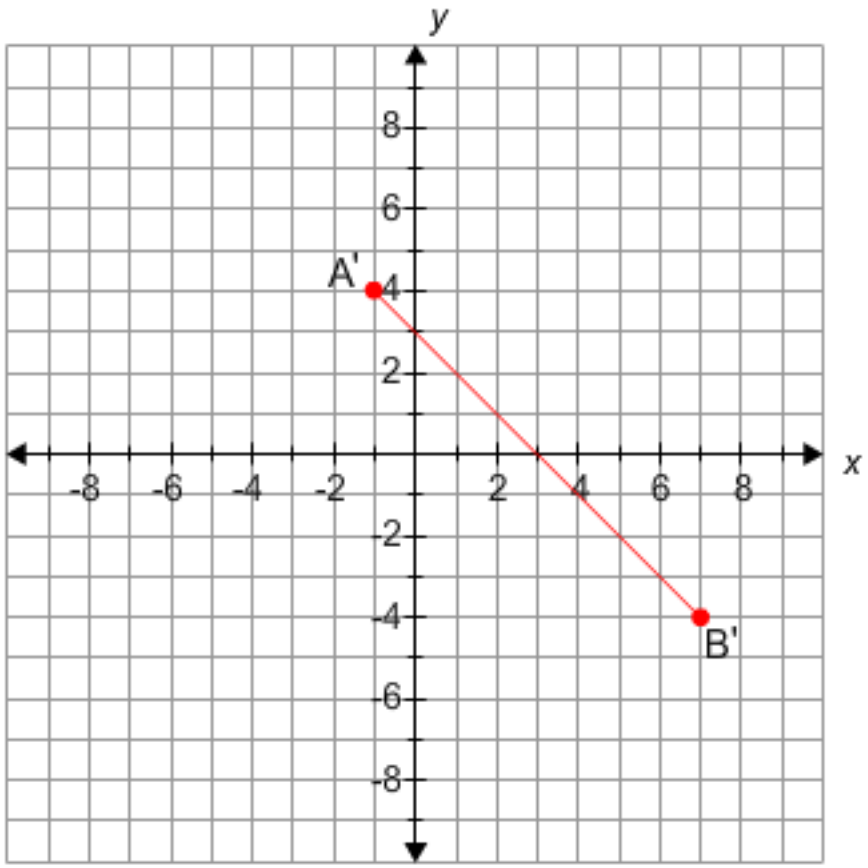
$$m\angle A + m\angle B + m\angle C = 180°$$
$$46.4° + 66.8° + m\angle C = 180°$$
$$113.2° + m\angle C = 180°$$
$$m\angle C = 180° - 113.2°$$
$$m\angle C = 66.8°$$

Since the measure of angle C' is the same as the measure of angle C, the measure of angle C' is **66.8°**.

4. A reflection is a transformation in which a figure flips over a line of reflection to create a mirror image. The mirror image has all the same angle and side measures as the original figure.

Therefore, in all reflections, **all angle measures remain the same**.

5. A translation is a transformation that "slides" a figure in any direction. In this case, the line segment will slide 2 units down and 3 units to the right.



The resulting image has the same length as the original figure, but the end points have been changed.

Therefore, the end points of the new line segment A'B' are **(-1,4) and (7,-4)**.

6. A reflection is a transformation in which a figure flips over a line of reflection to create a mirror image. The mirror image has all the same side measures as the original figure.

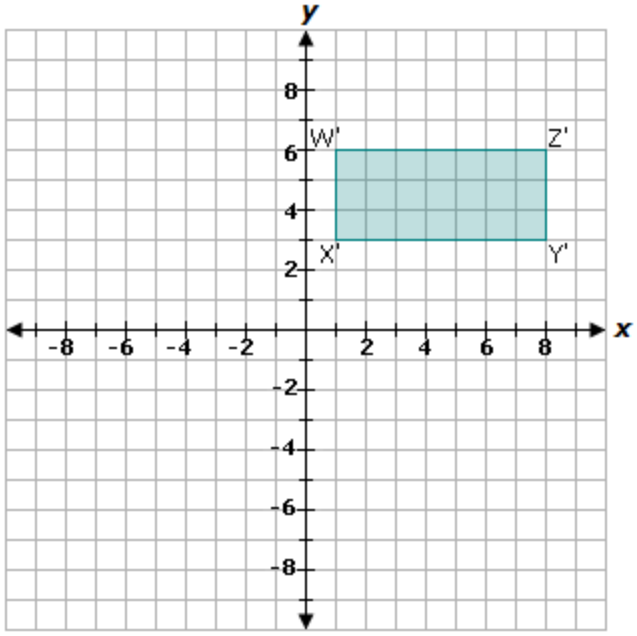
A rotation is a transformation in which the figure rotates around a fixed point. The rotated figure has all the same side measures as the original figure.

A translation is a transformation that "slides" a figure in any direction. The translated figure has all the same side measures as the original figure.

Therefore, side measures are preserved in **I, II, and III**, or in rotations, reflections, and translations.

7. A rotation is a transformation in which a figure rotates about a fixed point.

Rotate rectangle WXYZ 90° clockwise about the origin.



The resulting image has all the same angles and side measures as the original figure. In the image, the length of the rectangle is 7 units, and the width of the rectangle is 3 units. Use the formula to find the perimeter of the image.

$$\begin{aligned} P &= 2(l + w) \\ &= 2(7 \text{ units} + 3 \text{ units}) \\ &= 2(10 \text{ units}) \\ &= 20 \text{ units} \end{aligned}$$

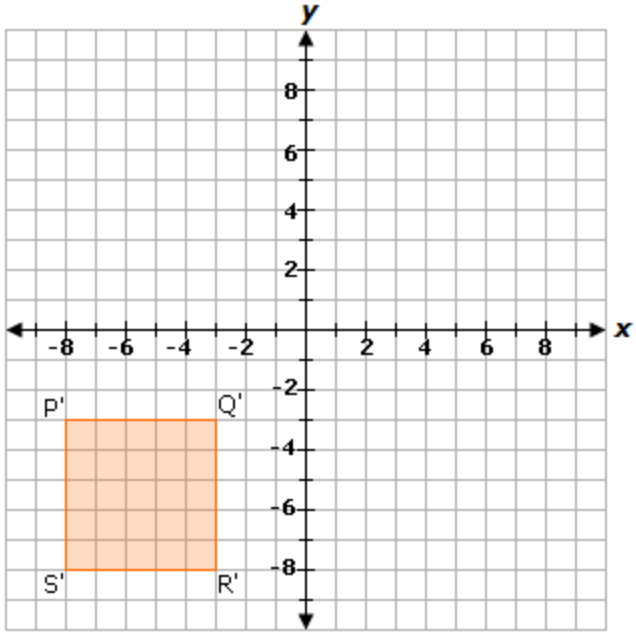
Therefore, the perimeter of rectangle W'X'Y'Z' is **20 units**.

8. A reflection is a transformation of an object that produces a mirror image of the original object without changing the size of the object.

Since the size of an object is not changed by a reflection, the length of the hypotenuse of the triangle in the mirror is **13 inches**.

9. A reflection is a transformation that "flips" a figure across a line.

Flip square PQRS across the *x*-axis.



The resulting image has all the same angles and side measures as the original figure. In both the pre-image and the image, the side of the square is 5 units. Use the formula to find the perimeter of the image.

$$\begin{aligned} P &= 4s \\ &= 4(5 \text{ units}) \\ &= 20 \text{ units} \end{aligned}$$

Therefore, the perimeter of square P'Q'R'S' is **20 units**.

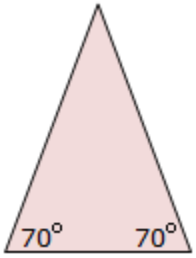
10. A translation is a transformation that "slides" a figure in any direction. The translated figure has all the same angle and side measures as the original figure.

Since the angles between all the sides remain the same in all translations, the orientation of the figure remains the same, and the slope of the sides of the translated figure remain the same as in the original figure.

Therefore, **all corresponding sides in a figure and its translation are parallel or lie on the same line**.

Grade 8 Math: Similar Triangles

1.

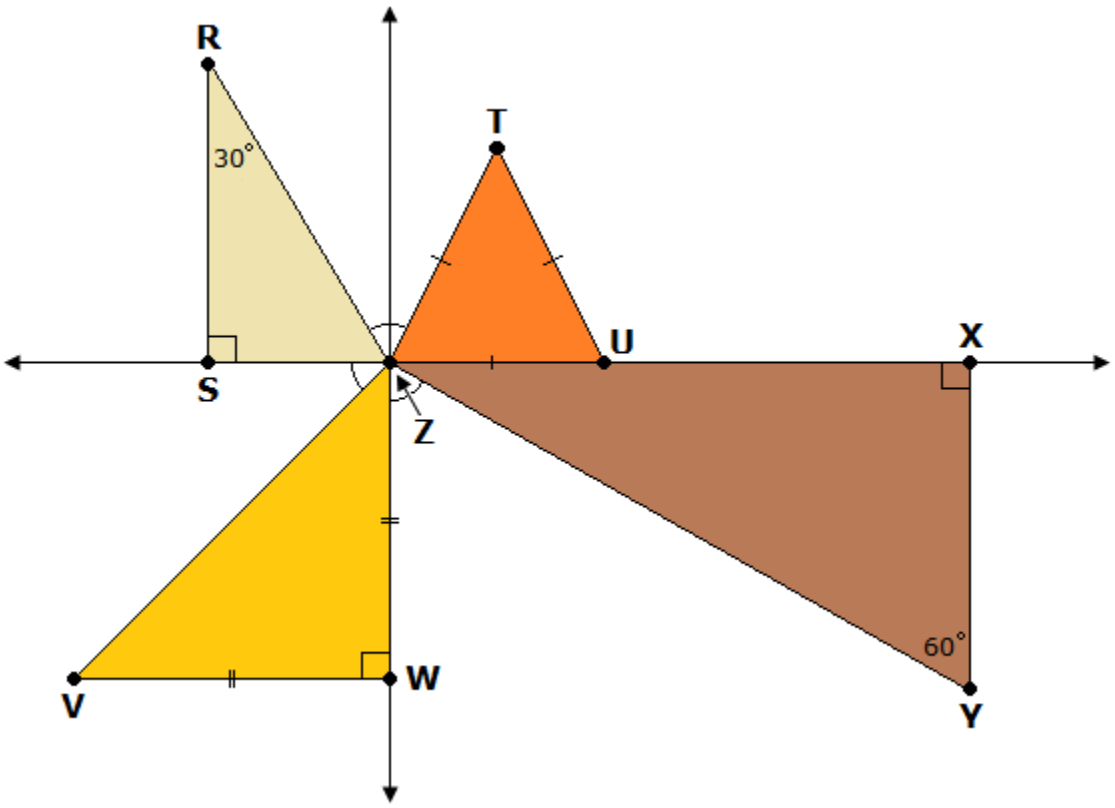


Which triangle is similar to the triangle above?

W. **X.** **Y.** **Z.**

- **A.** W
- **B.** Y
- **C.** X
- **D.** Z

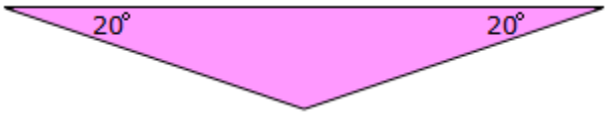
2.



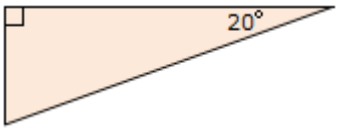
Determine which two triangles can be shown to be similar.

- **A.** Triangle RSZ and triangle ZXY are similar by angle-angle.
- **B.** Triangle ZTU and triangle VWZ are similar by angle-angle.
- **C.** Triangle RSZ and triangle VWZ are similar by angle-angle.
- **D.** Triangle ZWV and triangle ZXY are similar by angle-angle.

3.

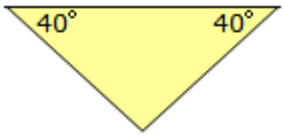


Which triangle is similar to the triangle above?

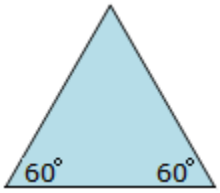


W.

X.



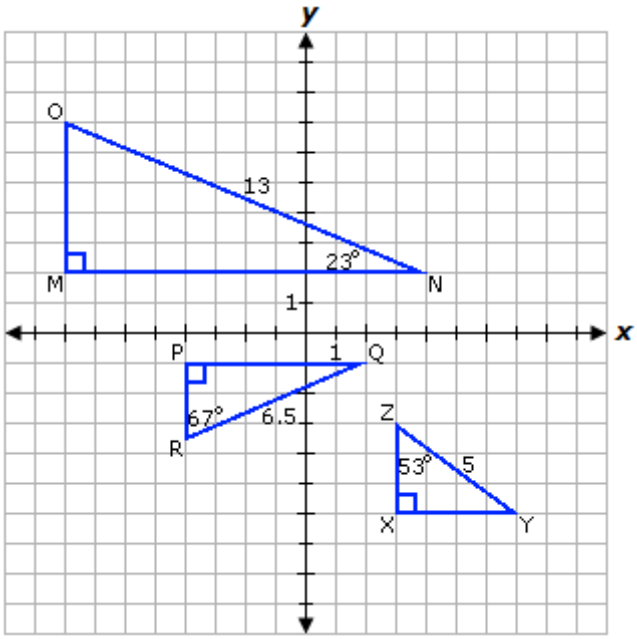
Y.



Z.

- **A.** X
- **B.** W
- **C.** Y
- **D.** Z

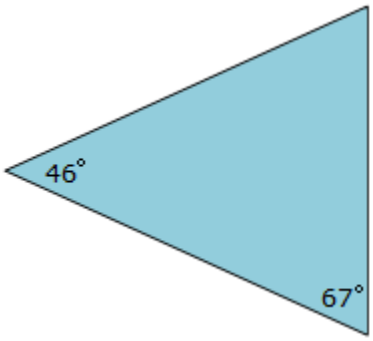
4. Triangle MNO was dilated and reflected to create similar triangle PQR. Triangle MNO and triangle XYZ are not similar.



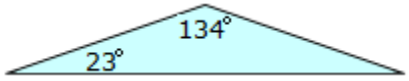
Which inference can be made about similar triangles?

- **A.** All triangles with at least two congruent angles are similar.
- **B.** Similar triangles have at least two congruent sides.
- **C.** Similar triangles have at least one congruent side.
- **D.** All triangles with at least one congruent angle are similar.

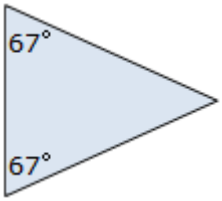
5.



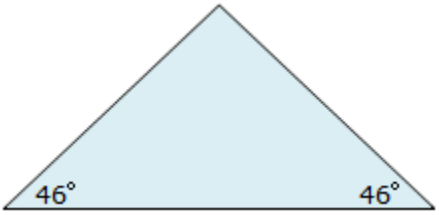
Which triangle is similar to the triangle above?



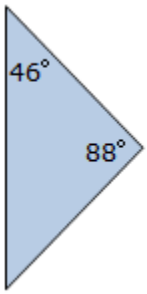
W.



X.



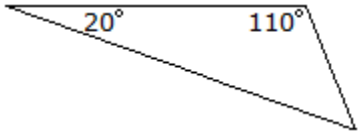
Y.



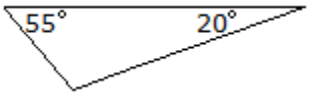
Z.

- **A.** Z
- **B.** W
- **C.** X
- **D.** Y

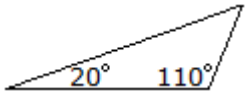
6.



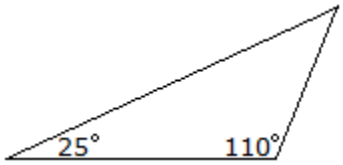
Which triangle is similar to the triangle above?



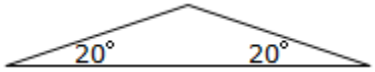
W.



X.



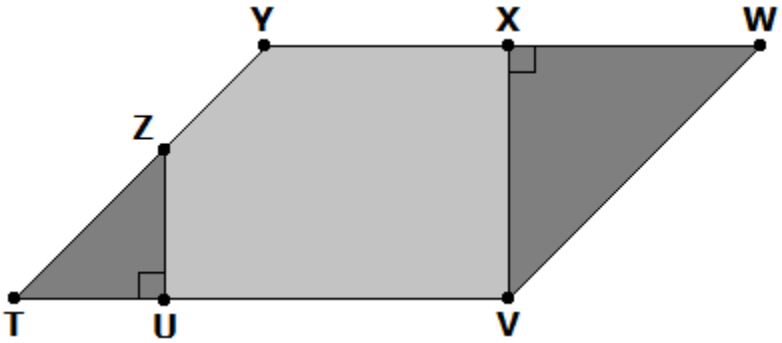
Y.



Z.

- **A.** Y
- **B.** W
- **C.** X
- **D.** Z

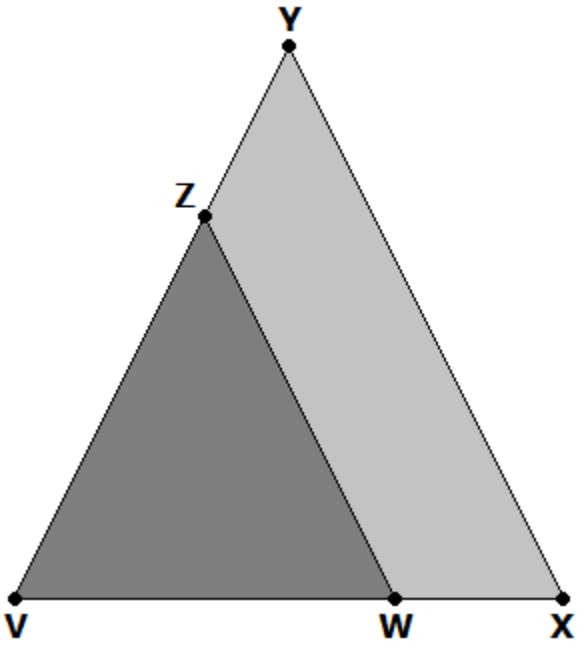
7.



Given the parallelogram TVWY shown above, determine how triangles TUZ and WXV can be shown to be similar.

- **A.** Since ∠ZTU ≅∠VWX and VX = XW, the triangles are similar by angle-side.
- **B.** Since ∠TUZ ≅∠WXV and TU = UZ, the triangles are similar by angle-side.
- **C.** Since ∠TUZ ≅∠WXV and ∠ZTU ≅∠VWX, the triangles are similar by angle-angle.
- **D.** Since ∠TUZ ≅∠VWX and ∠ZTU ≅∠WXV, the triangles are similar by angle-angle.

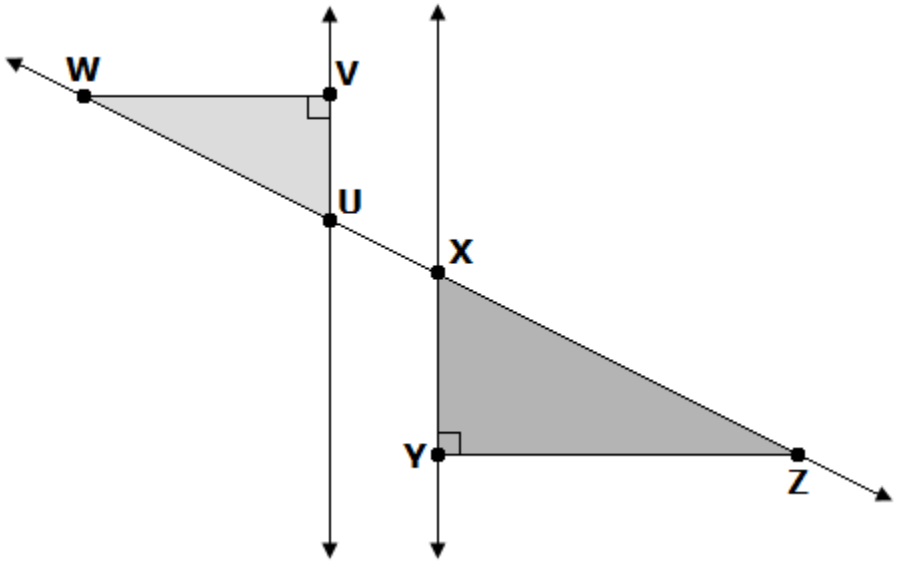
8.



Given that line segment ZW is parallel to line segment YX, determine how triangles VWZ and VXY can be shown to be similar.

- **A.** Since ∠VZW ≅∠VYX and ∠ZVW ≅∠YZW, the triangles are similar by angle-angle.
- **B.** Since ∠VZW ≅∠VYX and ∠ZVW ≅∠YVX, the triangles are similar by angle-angle.
- **C.** Since ∠VZW ≅∠VYX and VZ = WZ, the triangles are similar by angle-side.
- **D.** Since ∠VZW ≅∠VYX and VY = XY, the triangles are similar by angle-side.

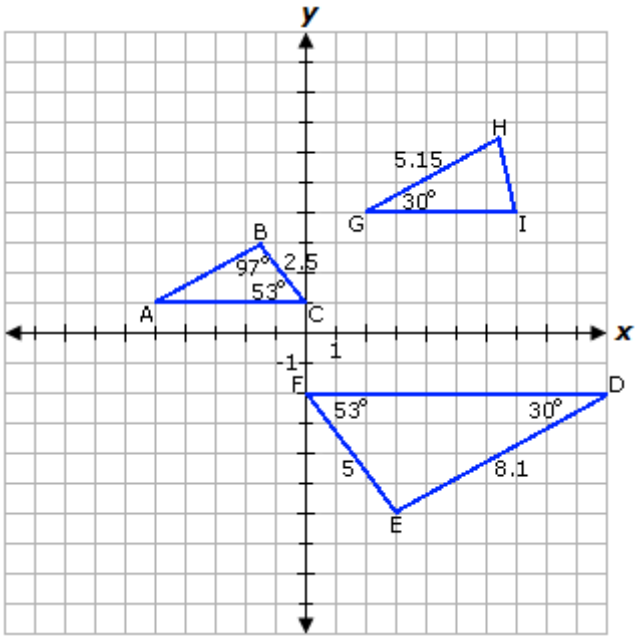
9.



Given that lines VU and XY are parallel, determine how triangles UVW and XYZ can be shown to be similar.

- **A.** Since ∠UVW ≅∠XYZ and VW = XY, the triangles are similar by angle-side.
- **B.** Since ∠UVW ≅∠XYZ and ∠WUV ≅∠YZX, the triangles are similar by angle-angle.
- **C.** Since ∠UVW ≅∠XYZ and ∠WUV ≅∠ZXY, the triangles are similar by angle-angle.
- **D.** Since ∠UVW ≅∠XYZ and WU = YZ, the triangles are similar by angle-side.

10. Triangle ABC was dilated and rotated to create similar triangle DEF. Triangle ABC and triangle GHI are not similar.



Which inference can be made about similar triangles?

- **A.** All triangles with at least one congruent angle are similar.
- **B.** Similar triangles have at least two congruent sides.
- **C.** Similar triangles have three congruent sides.
- **D.** All triangles with at least two congruent angles are similar.

Answers

1. D
2. A
3. A
4. A
5. C
6. C
7. C
8. B
9. C
10. D

Explanations

1. Two triangles are similar if all pairs of angles are equal.

The missing angle can be found by subtracting the known angles from 180°.

The angle measures in the given triangle are 70°, 70°, and 40°.

The similar triangle must have angle measures of 70°, 70°, and 40°.

Therefore, the similar triangle is triangle **Z**.

2. Since $\angle$RSZ and $\angle$ZXY are right angles, they are congruent.

Now, find the measure of the third angle in triangle ZXY. The sum of the angles in a triangle is 180°.

$$\begin{aligned} m\angle ZXY + m\angle XYZ + m\angle YZX &= 180° \\ 90° + 60° + m\angle YZX &= 180° \\ 150° + m\angle YZX &= 180° \\ m\angle YZX &= 30° \end{aligned}$$

Since $\angle$ZRS and $\angle$YZX both have a measure of 30°, they are congruent.

Therefore, **triangle RSZ and triangle ZXY are similar by angle-angle**.

3. Two triangles are similar if all pairs of angles are equal.

If two angles of one triangle are congruent to two angles of another triangle, then the third pair of angles is also congruent.

The angle measures in the given triangle are 20° and 20°.

The similar triangle must have angle measures of 20° and 20°.

Therefore, the similar triangle is triangle **X**.

4. Consider the angles of triangle MNO. Since the sum of the three angles of a triangle is 180°, the measure of angle O is 67°.

Thus, triangles MNO and PQR, which are similar, both have angle measures of 90° and 67°. So, they have at least two congruent angles. Note that even though triangle XYZ has one angle congruent to triangle MNO, the two triangles are not similar.

Now consider the side lengths of the triangles. A dilation changes the size of each side length, so triangles MNO and PQR are similar and have different corresponding side lengths.

Therefore, the inference that can be made is **all triangles with at least two congruent angles are similar.**

5. Two triangles are similar if all pairs of angles are equal.

The missing angle can be found by subtracting the known angles from 180°.

The angle measures in the given triangle are 46°, 67°, and 67°.

The similar triangle must have angle measures of 46°, 67°, and 67°.

Therefore, the similar triangle is triangle **X**.

6. Two triangles are similar if all pairs of angles are equal.

If two angles of one triangle are congruent to two angles of another triangle, then the third pair of angles is also congruent.

The angle measures in the given triangle are 20° and 110°.

The similar triangle must have angle measures of 20° and 110°.

Therefore, the similar triangle is triangle **X**.

7. Since ∠TUZ and ∠WXV are right angles, they are congruent.

Since ∠ZTU and ∠VWX are opposite angles in a parallelogram, they are congruent.

Therefore, **since ∠TUZ ≅ ∠WXV and ∠ZTU ≅ ∠VWX, the triangles are similar by angle-angle**.

8. It is given that line segments ZW and YX are parallel.

Since ∠VZW and ∠VYX are corresponding angles, they are congruent. Also, since ∠ZVW and ∠YVX

represent the same angle, they are congruent.

Therefore, **since ∠VZW ≅∠VYX and ∠ZVW ≅∠YVX , the triangles are similar by angle-angle**.

9. Since ∠UVW and ∠XYZ are right angles, they are congruent.

It is given that lines VU and XY are parallel. Since ∠WUV and ∠ZXY are alternate exterior angles, they are congruent.

Therefore, **since ∠UVW ≅∠XYZ and ∠WUV ≅∠ZXY, the triangles are similar by angle-angle**.

10. Consider the angles of triangle ABC. Since the sum of the three angles of a triangle is 180°, the measure of angle A is 30°.

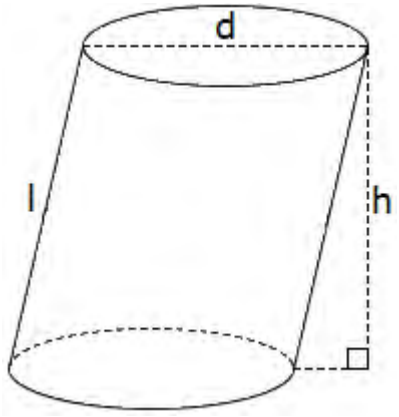
Thus, triangles ABC and DEF, which are similar, both have angle measures of 53° and 30°. So, they have at least two congruent angles. Note that even though triangle GHI has one angle congruent to triangle ABC, the two triangles are not similar.

Now consider the side lengths of the triangles. A dilation changes the size of each side length, so triangles ABC and DEF are similar and have different corresponding side lengths.

Therefore, the inference that can be made is **all triangles with at least two congruent angles are similar.**

Grade 8 Math: Volume

1. Consider the given oblique cylinder, which has a diameter, *d*, of 2 inches, a height, *h*, of 3 inches, and a slant height, *l*, of 3.1 inches.



Approximately what is the volume of the cylinder?

- **A.** 9.4 cubic inches
- **B.** 37.7 cubic inches
- **C.** 9.7 cubic inches
- **D.** 28.3 cubic inches

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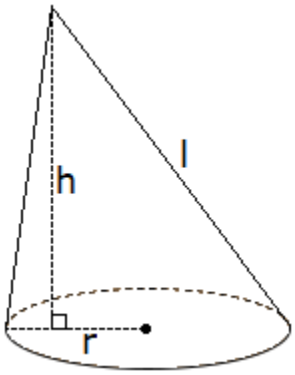
2. Leigh bought a conical candle wax mold. The height of the mold is 17.4 inches and the radius of the inside of the top of the conical mold is 2.1 inches. She fills the mold completely with candle wax so that it is level with the top of the conical mold.

Using 3.14 for π, approximately how much candle wax can the conical mold hold?

- **A.** 29.08 cubic inches
- **B.** 38.25 cubic inches
- **C.** 114.74 cubic inches
- **D.** 80.31 cubic inches

3. Consider the given oblique cone, which has a radius, *r*, of 2.6 millimeters, a height, *h*, of 6.5 millimeters, and a slant height, *l*, of 9.1 millimeters.



Approximately what is the volume of the cone?

- **A.** 46 cubic millimeters
- **B.** 115 cubic millimeters
- **C.** 64.4 cubic millimeters
- **D.** 138 cubic millimeters

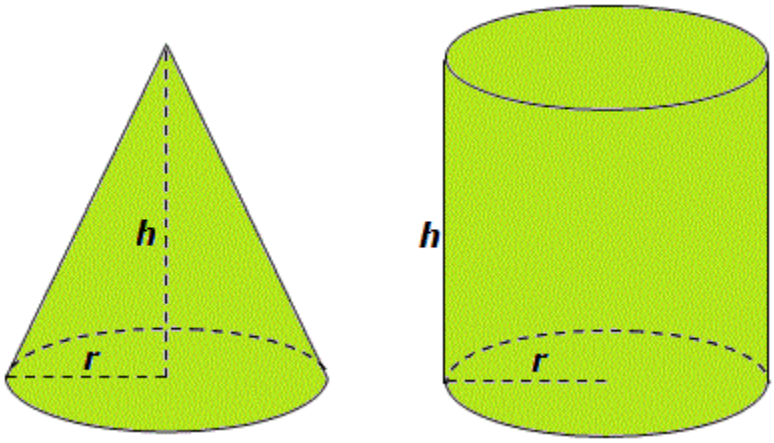
4.

Note: Figure is not drawn to scale

If the sphere shown above has a radius of 20 units, then what is the approximate volume of the sphere? (Use 3.14 for π.)

- **A.** 41,866.67 cubic units
- **B.** 16,746.67 cubic units
- **C.** 628 cubic units
- **D.** 33,493.33 cubic units

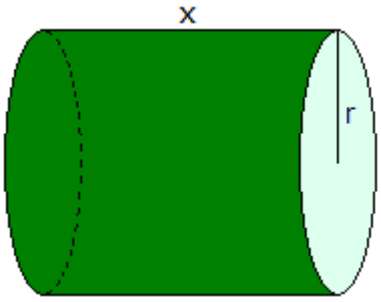
5.



The cone and cylinder above have the same radius and height. The volume of the cylinder is 69 cm^3. What is the volume of the cone?

- **A.** 23 cm^3
- **B.** 138 cm^3
- **C.** 34.5 cm^3
- **D.** 207 cm^3

6.



Note: Figure is not drawn to scale.

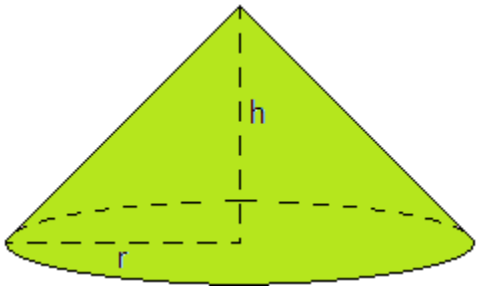
If r = 5 units and x = 12 units, then what is the volume of the cylinder shown above?

- **A.** 60π cubic units
- **B.** 170π cubic units
- **C.** 1,200π cubic units
- **D.** 300π cubic units

7. A soup can has a height of 4 inches and a diameter of 3 inches. Which of the following is the closest to the volume of the soup can?

- **A.** 28 cubic inches
- **B.** 19 cubic inches
- **C.** 38 cubic inches
- **D.** 113 cubic inches

8.

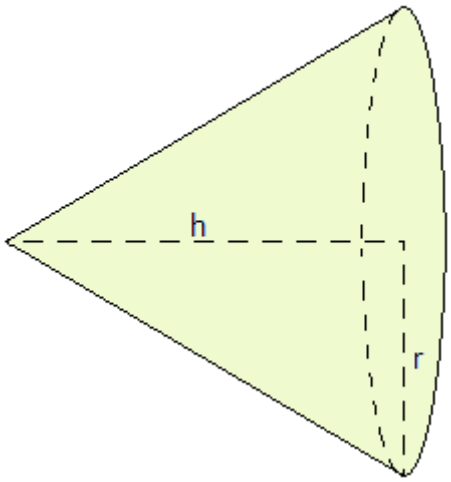


Note: Figure is not drawn to scale.

If h = 15 units and r = 5 units, what is the volume of the cone shown above?
Use 3.14 for π.

- **A.** 392.5 cubic units
- **B.** 1,177.5 cubic units
- **C.** 235.5 cubic units
- **D.** 78.5 cubic units

9.



Note: Figure is not drawn to scale.

If h = 11 units and r = 4 units, then what is the approximate volume of the cone shown above?

- **A.** 161.33π cubic units
- **B.** 176π cubic units
- **C.** 44π cubic units
- **D.** 58.67π cubic units

---

10. A fruit bowl contains apples, oranges, and bananas. The radius of one of the oranges is 1.35 inches. What is the approximate volume of the orange? Use 3.14 for π.

- **A.** 7.63 cubic inches
- **B.** 10.30 cubic inches
- **C.** 1.29 cubic inches
- **D.** 22.89 cubic inches

Answers

1. A
2. D
3. A
4. D
5. A
6. D
7. A
8. A
9. D
10. B

Explanations

1. The formula for finding the volume of an oblique cylinder is the same as the formula for finding the volume of a right cylinder, so use the formula for the volume of a cylinder to solve.

Since the formula uses radius, divide the given diameter by 2. Also, the formula uses the vertical height of the cylinder, *h*, rather than the slant height of the cylinder, *l*.

$$\begin{aligned} V &= \pi r^2 h \\ &= \pi(1 \text{ in})^2(3 \text{ in}) \\ &= 3\pi \text{ in}^3 \\ &\approx 9.4 \text{ in}^3 \end{aligned}$$

Therefore, the volume of the cylinder is approximately **9.4 cubic inches**.

2. Use the following formula to find the volume of the conical mold.

$$\begin{aligned} V &= \tfrac{1}{3}\pi r^2 h \\ &= \tfrac{1}{3}(3.14)(2.1 \text{ in})^2(17.4 \text{ in}) \\ &\approx 80.31 \text{ in}^3 \end{aligned}$$

Therefore, the conical mold will hold approximately **80.31 cubic inches** of candle wax when filled to be level with the top of the cone.

3. The formula for finding the volume of an oblique cone is the same as the formula for finding the volume of a right cone, so use the formula for the volume of a cone to solve.

The formula uses the vertical height of the cone, *h*, rather than the slant height of the cone, *l*.

$$V = \frac{1}{3}\pi r^2 h$$

$$= \frac{1}{3}\pi(2.6 \text{ mm})^2(6.5 \text{ mm})$$

$$= \frac{1}{3}\pi(43.94 \text{ mm}^3)$$

$$\approx 46 \text{ mm}^3$$

Therefore, the volume of the cone is approximately **46 cubic millimeters**.

4. To find the volume of the sphere, use the formula given below.

$$\text{Volume} = \frac{4}{3}\pi r^3$$

Use this formula, the value given for the radius, and 3.14 for π to find the volume.

$$\text{Volume} = \frac{4}{3}\pi r^3$$

$$\approx \frac{4}{3}(3.14)(20 \text{ units})^3$$

$$\approx 33{,}493.33 \text{ cubic units}$$

Therefore, the approximate volume of the sphere is **33,493.33 cubic units**.

5. The volume of a cylinder can be found using the formula below.

$$\text{Volume} = \pi r^2 h$$

The volume of a cone can be found using the formula below.

$$\text{Volume} = \frac{1}{3}\pi r^2 h$$

Notice that if a cylinder and a cone have the same dimensions, the volume of the cone is one-third the volume of the cylinder, and the volume of the cylinder is three times the volume of the cone.

Since the cylinder and the cone have the same dimensions, divide the volume of the cylinder by 3 to find the volume of the cone.

$$69 \text{ cm}^3 \div 3 = 23 \text{ cm}^3$$

Therefore, the volume of the cone is **23 cm^3**.

6. The volume of a cylinder can be found using the formula given below.

$$\text{Volume} = \pi \times (\text{radius})^2 \times \text{height}$$

In the picture, *r* represents the radius of the cylinder and *x* represents the height of the cylinder.

Use the values for these variables given in the question and the formula above to find the volume of the cylinder.

$$\begin{aligned}\text{Volume} &= \pi r^2 x \\ &= \pi(5 \text{ units})^2(12 \text{ units}) \\ &= 300\pi \text{ cubic units}\end{aligned}$$

7. Use the formula for the volume of a cylinder to solve.

Remember, since the formula uses radius, divide the given diameter by two.

$V_{cylinder} = \pi\ r^2h$

$\approx (3.14)(1.5 \text{ in})^2(4 \text{ in})$

$= 28.26$ cubic inches

$\approx$ **28 cubic inches**

8. The formula below can be used to find the volume of a cone, where *V* is the volume, *r* is the radius, and *h* is the height.

$$V = \frac{1}{3}\pi r^2 h$$

Substitute *r* = 5 units and *h* = 15 units into the formula, and solve for *V*.

$$\begin{aligned}V &= \frac{1}{3}\pi(5 \text{ units})^2(15 \text{ units}) \\ &\approx \frac{1}{3}(3.14)(25 \text{ square units})(15 \text{ units}) \\ &= 392.5 \text{ cubic units}\end{aligned}$$

Therefore, the volume of the cone is **392.5 cubic units**.

9. To find the volume of a cone, use the formula given below.

$$\text{Volume} = \frac{1}{3} \times \text{area of circular base} \times \text{height}$$

First, find the area of the circular base.

$$\begin{aligned}\text{Area of Circular Base} &= \pi r^2 \\ &= \pi(4 \text{ units})^2 \\ &= 16\pi \text{ square units}\end{aligned}$$

Next, use this result along with the formula given above to find the volume of the cone.

$$\begin{aligned}\text{Volume} &= \tfrac{1}{3} \times \text{area of circular base} \times \text{height} \\ &= \tfrac{1}{3} \times (16\pi \text{ square units}) \times (11 \text{ units}) \\ &\approx 58.67\pi \text{ cubic units}\end{aligned}$$

10. Use the formula below to find the volume of the orange.

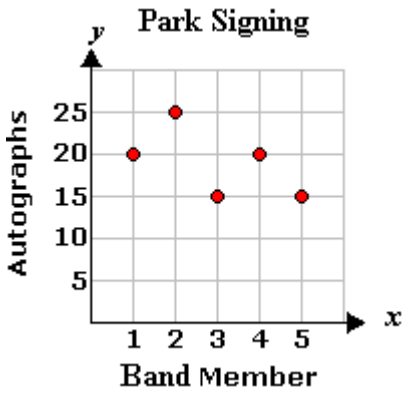
$$\begin{aligned}V &= \tfrac{4}{3}\pi r^3 \\ &\approx \tfrac{4}{3}(3.14)(1.35 \text{ in})^3 \\ &\approx 10.30 \text{ in}^3\end{aligned}$$

Therefore, the approximate volume of the orange is **10.30 cubic inches**.

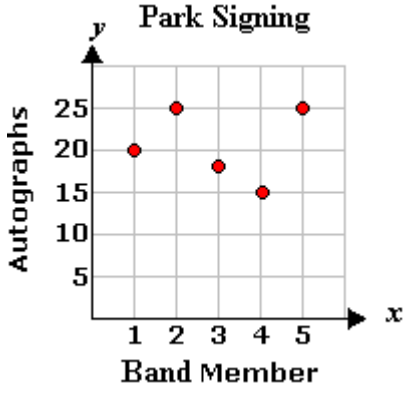
Grade 8 Math: Scatter Plots

1. Five members of a punk band were at the local skatepark, signing autographs. The table below shows the number of autographs signed by each band member during the first hour. Which scatter plot matches the table?

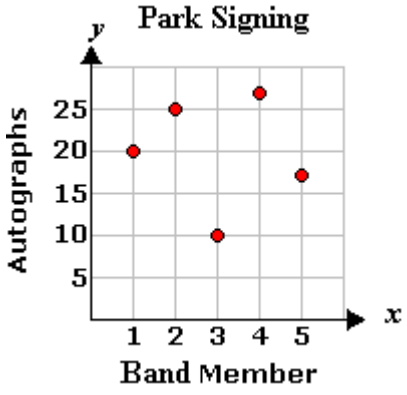
Band Member	Autographs
1	20
2	25
3	10
4	15
5	20



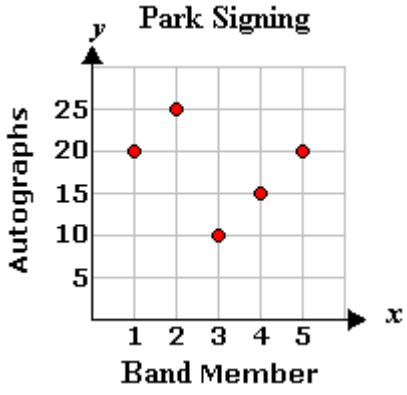
W.



X.



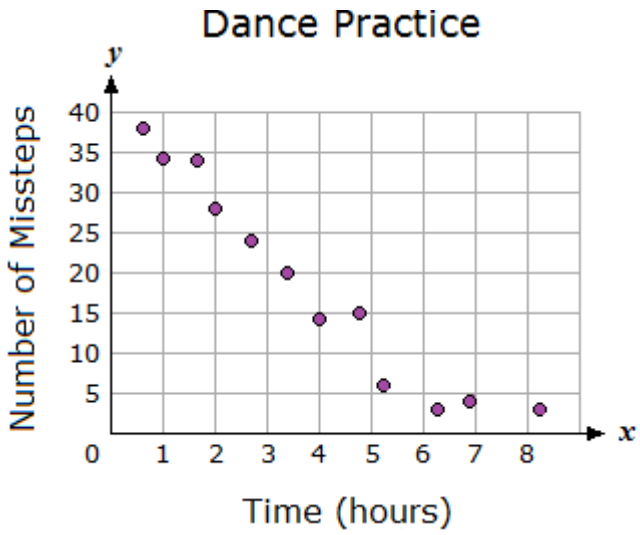
Y.



Z.

- **A.** X
- **B.** Y
- **C.** Z
- **D.** W

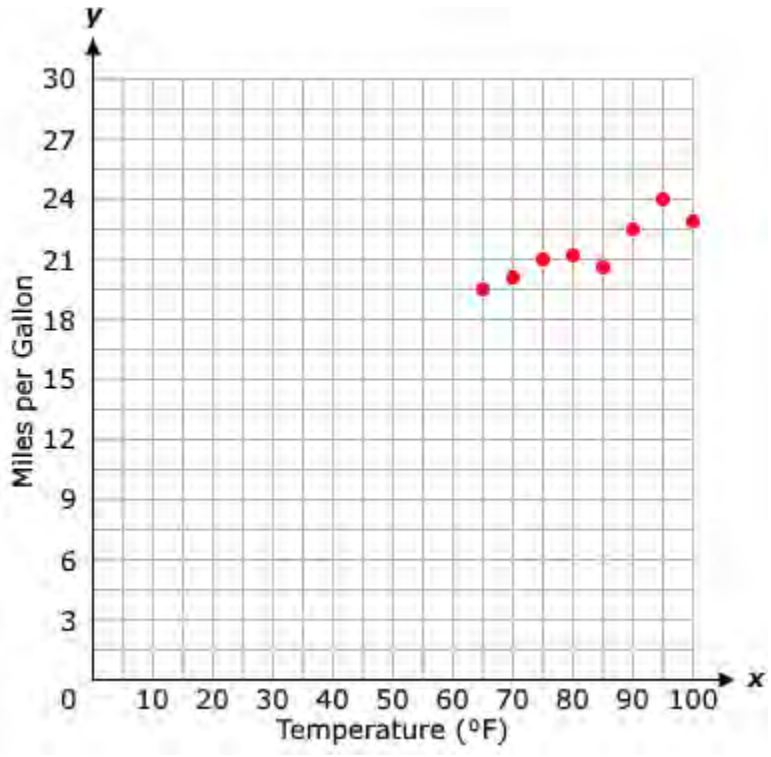
2. A dancer learned some new choreography for a dance contest. The instructor kept track of the number of missteps he made. The results are shown in the scatter plot below.



Which statement is supported by the data in the scatter plot?

- **A.** As the practice time increases, the number of missteps tends to decrease.
- **B.** As the practice time increases, the number of missteps tends to stay the same.
- **C.** There is no relationship between the practice time and the number of missteps.
- **D.** As the practice time increases, the number of missteps tends to increase.

3. David wondered if the temperature outside affects his gas mileage. He recorded the temperature and his gas mileage over the last few months. His data is shown below.



What can he conclude from his data?

- **A.** There is no relationship between the temperature and his gas mileage.
- **B.** The cooler the temperature, the better his gas mileage.
- **C.** The hotter the temperature, the worse his gas mileage.
- **D.** The hotter the temperature, the better his gas mileage.

---

4. The data represents the ages and heights of seven neighborhood children.

Children's Heights

Age	8	8	10	12	13	15	16
Height (in)	37	39	48	50	53	62	67

How would this data be interpreted on a scatter plot?

- **A.** A scatter plot would show a constant association between the children's ages and their heights.
- **B.** A scatter plot would show no association between the children's ages and their heights.
- **C.** A scatter plot would show a negative association between the children's ages and their heights.
- **D.** A scatter plot would show a positive association between the children's ages and their heights.

5. The data represents the number of miles eight families traveled on short weekend trips and the number of times the families stopped to view the scenery.

Weekend Trips

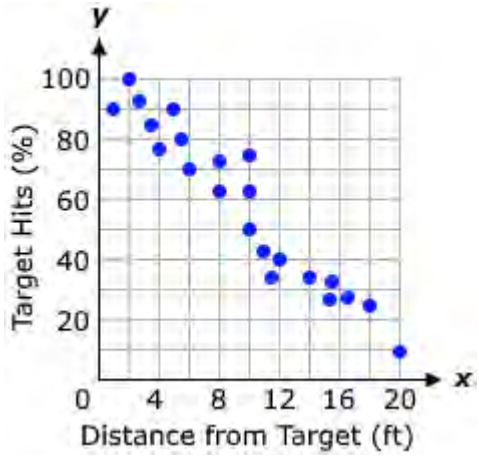
Number of Miles	75	250	250	350	125	200	175	350
Number of Stops	5	3	1	2	4	5	2	4

How would this data be interpreted on a scatter plot?

- **A.** A scatter plot would show a positive association between the miles traveled and the number of stops.
- **B.** A scatter plot would show no association between the miles traveled and the number of stops.
- **C.** A scatter plot would show a negative association between the miles traveled and the number of stops.
- **D.** A scatter plot would show a constant association between the miles traveled and the number of stops.

---

6. At a children's archery camp, the percentage of target hits at different distances from the target for several campers were recorded. The data is shown in the scatter plot below.

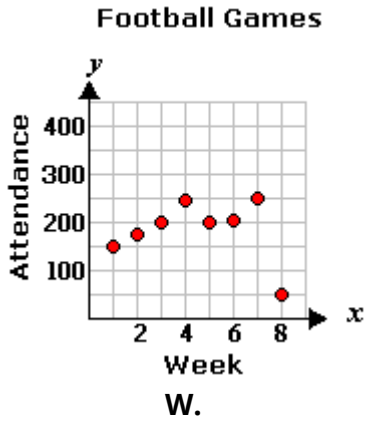


Which interpretation can be made from this data?

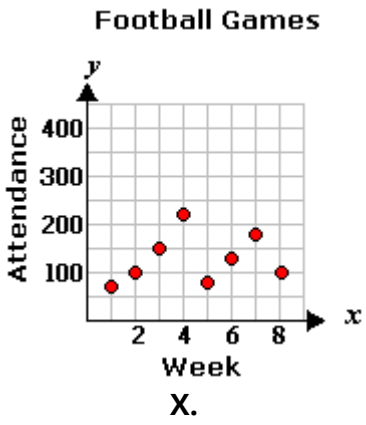
- **A.** There is a negative association between the distance from the target and the percentage of target hits.
- **B.** There is both a positive and a negative association between the distance from the target and the percentage of target hits.
- **C.** There is no association between the distance from the target and the percentage of target hits.
- **D.** There is a positive association between the distance from the target and the percentage of target hits.

7. The table below shows the attendance at football games. Which scatter plot matches the table?

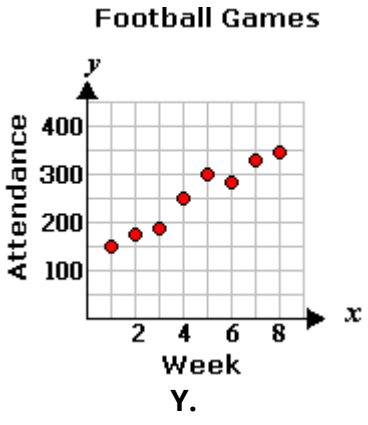
Week	Attendance
1	65
2	100
3	150
4	220
5	80
6	120
7	190
8	100



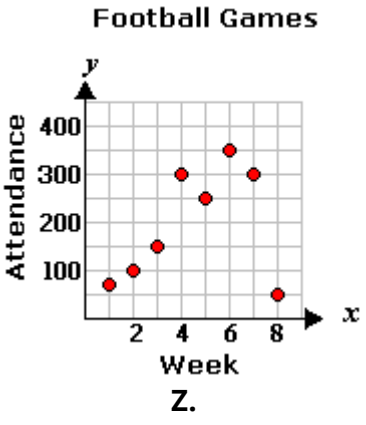
W.



X.



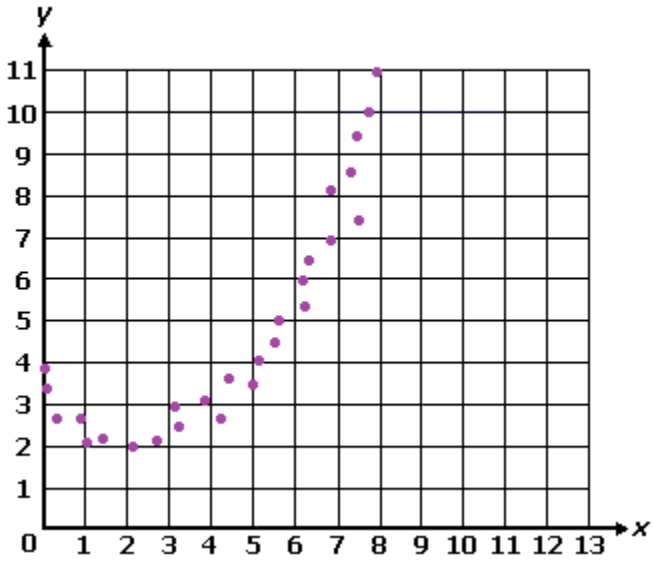
Y.



Z.

- **A.** Z
- **B.** X
- **C.** Y
- **D.** W

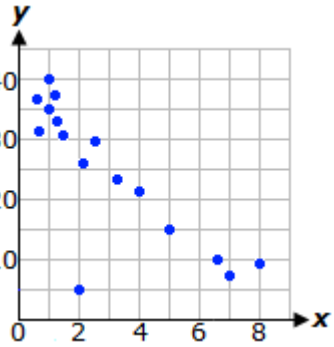
8. Which of the following best describes the relationship between the variables on the scatter plot below?



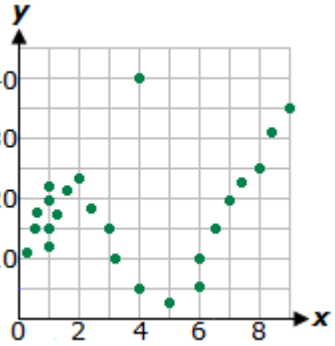
- **A.** nonlinear association
- **B.** no association
- **C.** linear association
- **D.** linear and nonlinear association

9. Which scatter plot shows data with linear association, one outlier, and clustering around $x = 1$?

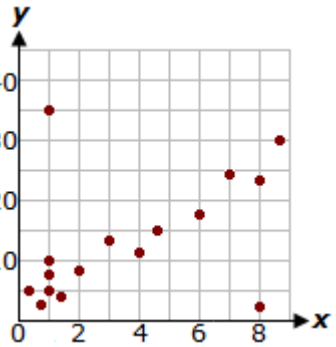
○ **A.**



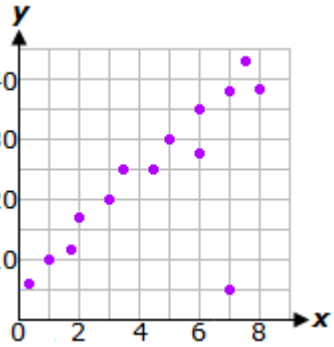
○ **B.**



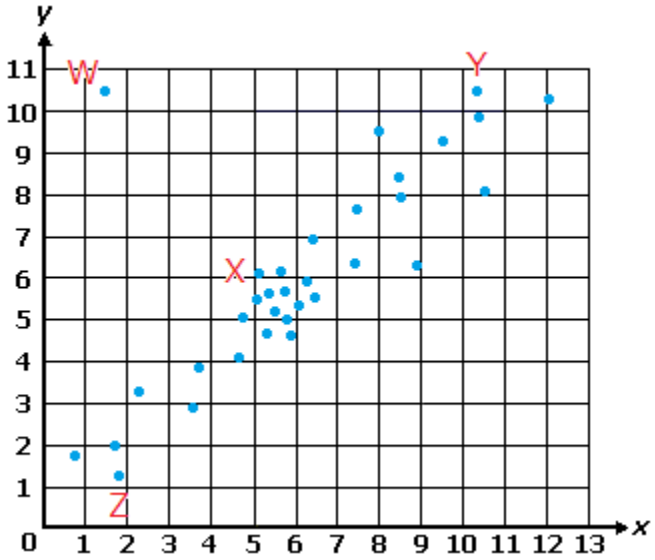
○ **C.**



○ **D.**



10. Which of the following best describes X on the scatter plot below?



- **A.** nonlinear association
- **B.** cluster
- **C.** outlier
- **D.** negative association

Answers: Scatter Plots

1. C
2. A
3. D
4. D
5. B
6. A
7. B
8. A
9. A
10. B

Explanations

1. To determine which scatter plot matches the table, choose any of the points from the table and plot them on the graphs. The *Band Member* will be the *x*-value and the *Autographs* will be the *y*-value.

For example, choose the points (1, 20), (2, 25), (3, 10), and (4, 15).

The only scatter plot that contains these points is **Z**.

2. The practice time is shown on the *x*-axis. The number of missteps is shown on the *y*-axis.

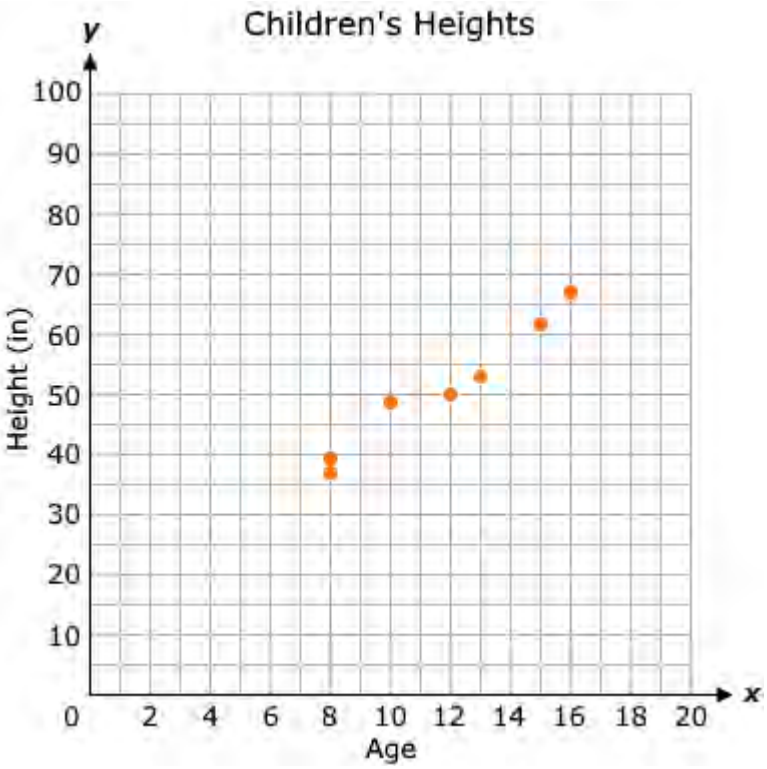
As the practice time increases, the number of missteps generally decreases.

Therefore, **as the practice time increases, the number of missteps tends to decrease**.

3. Temperature is shown on the *x*-axis. Gas mileage is shown on the *y*-axis. As the temperature outside increases, the gas mileage on his car generally increases as well. (High gas mileage is preferred to low gas mileage.)

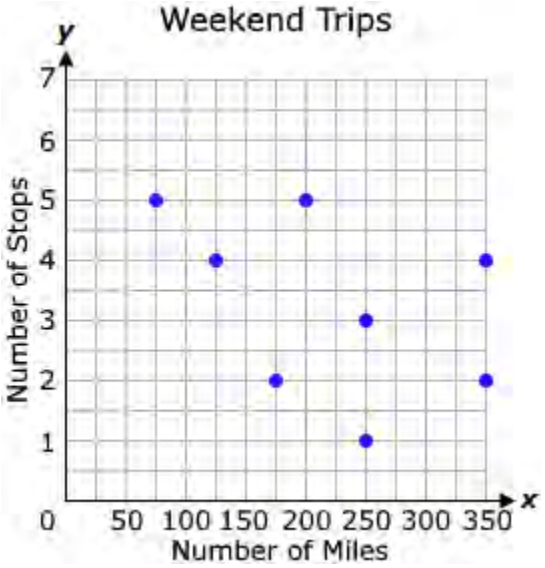
Therefore, **the hotter the temperature, the better his gas mileage**.

4. The children's heights increase as their ages increase.



Therefore, this data on **a scatter plot would show a positive association between the children's ages and their heights.**

5. The number of stops does not increase or decrease overall as the number of miles traveled increases. The points plotted on a scatter plot would not rise or fall in either direction.



Therefore, this data on **a scatter plot would show no association between the miles traveled and the number of stops.**

6. Distance from the target (in feet) is shown on the horizontal axis. Percentage of target hits is shown on the vertical axis. As the distance from the target increased, the percentage of target hits decreased.

The dots on the scatter plot go down and to the right. This indicates a negative association.

Therefore, **there is a negative association between the distance from the target and the percentage of target hits.**

7. To determine which scatter plot matches the table, choose any of the points from the table and plot them on the graphs. The *Week* will be the *x*-value and the *Attendance* will be the *y*-value.

For example, choose the points (1, 65), (2, 100), (3, 150), and (4, 220).

The only scatter plot that contains these points is **X**.

8. The data in the scatter plot does not follow the shape of a line. It follows the shape of the graph of a quadratic function.

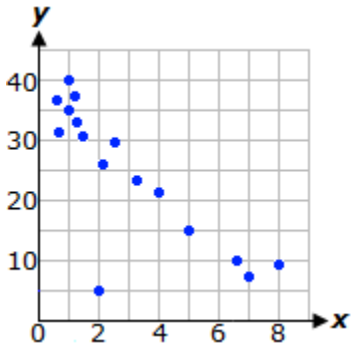
Therefore, there is a **nonlinear association** between the variables on the scatter plot.

9. In a scatter plot, a linear association between the variables means that the data set can be modeled with a line.

An outlier is a data value that is far removed from the rest of the data set.

A cluster is a collection of data that are grouped closely together around a specific value of *x*.

So, the scatter plot that shows data with linear association, one outlier, and clustering around $x = 1$ is shown below.



10. A cluster is data that are grouped closely together.

In this case, X is close to several data points that are grouped closely together.

Therefore, X is best described as a **cluster**.

Grade 8 Math: Construct Two-Way Tables

1. After a movie based on a popular book was released in the theaters, Jeremy gathered data from a group of 86 people about whether they had read the book and whether they had seen the movie.

A summary of the data he gathered is shown.

- 31 people read the book and saw the movie.
- A total of 46 people saw the movie.
- A total of 45 people read the book.

Which two-way table represents the data Jeremy gathered?

A.

	Read Book	Did Not Read Book
Saw Movie	31	14
Did Not See Movie	15	26

B.

	Read Book	Did Not Read Book
Saw Movie	31	45
Did Not See Movie	46	86

C.

	Read Book	Did Not Read Book
Saw Movie	31	46
Did Not See Movie	45	86

D.

	Read Book	Did Not Read Book
Saw Movie	31	15
Did Not See Movie	14	26

2. Mr. Duncan surveyed 58 middle school students to see if they are planning to attend the homecoming football game. The table shows the results of his survey.

	7th Graders	8th Graders
Attending	*x*	27
Not Attending	12	8

How many of the middle school students surveyed are in the 7th grade and plan to attend the homecoming football game?

- **A.** 31
- **B.** 11
- **C.** 23
- **D.** 46

---

3. Alan gathered data from a group of restaurants about whether they offer delivery and whether they take reservations. The two-way table displays the relative frequencies of the data.

	Delivery	No Delivery	Total
Reservations	0.43	0.57	1.00
No Reservations	0.69	0.31	1.00

Note: Values in the table are rounded to the nearest hundredth.

Based on the relative frequencies of the table, which two-way table is a possible representation of the data collected?

A.

	Delivery	No Delivery
Reservations	27	54
No Reservations	36	24

B.

	Delivery	No Delivery
Reservations	18	24
No Reservations	36	16

C.

	Delivery	No Delivery
Reservations	39	42
No Reservations	7	2

D.

	Delivery	No Delivery
Reservations	33	47
No Reservations	59	21

---

4. A principal collected data from eighth grade students about whether or not they are in band and whether or not they are in choir.

The information collected is shown below.

- 26 students are in band and choir
- 32 students are in choir and not band
- 43 students are in band and not choir
- 19 students are in neither band nor choir

Which two-way table represents the data collected?

	Band	Not Band
Choir	32	26
Not Choir	43	19

W.

	Band	Not Band
Choir	26	32
Not Choir	43	19

X.

	Band	Not Band
Choir	19	43
Not Choir	32	26

Y.

	Band	Not Band
Choir	26	32
Not Choir	19	43

Z.

- ○ **A.** Z
- ○ **B.** W
- ○ **C.** Y
- ○ **D.** X

5. A newspaper reporter surveyed a sample of area residents about whether they knew the local high school team won a conference championship and whether they had family members attending the school. The two-way table shows the data collected.

	Knew	Did Not Know
Family Members Attending the School	79	42
No Family Members Attending the School	12	69

When the values in the table are rounded to the nearest hundredth, which table correctly displays the row relative frequency for this data set?

A.

	Knew	Did Not Know
Family Members Attending the School	0.87	0.38
No Family Members Attending the School	0.13	0.62

B.

	Knew	Did Not Know
Family Members Attending the School	0.39	0.21
No Family Members Attending the School	0.06	0.34

C.

	Knew	Did Not Know
Family Members Attending the School	0.64	0.26
No Family Members Attending the School	0.06	0.52

D.

	Knew	Did Not Know
Family Members Attending the School	0.65	0.35
No Family Members Attending the School	0.15	0.85

6. Sam surveyed 61 students to ask if they have ever ridden a horse. The table shows the results of his survey.

	Have Ridden a Horse	Have Not Ridden a Horse
Male	9	16
Female	28	*x*

How many students surveyed are female and have not ridden a horse?

- **A.** 24
- **B.** 8
- **C.** 45
- **D.** 33

---

7. An electronic store polled several of their customers to find whether or not they played games on a tablet or gaming system.

The results of the poll are shown below.

- 11 customers played on both a tablet and gaming system
- 12 customers played on neither a tablet nor a gaming system
- 3 customers played only on gaming system
- 49 customers played only on tablet

Which two-way table represents the results of the poll?

W.

	Tablet	No Tablet
Gaming System	3	11
No Gaming System	49	12

X.

	Tablet	No Tablet
Gaming System	11	3
No Gaming System	49	12

Y.

	Tablet	No Tablet
Gaming System	11	3
No Gaming System	12	49

Z.

	Tablet	No Tablet
Gaming System	12	3
No Gaming System	49	11

- **A.** Z
- **B.** Y
- **C.** X
- **D.** W

8. Patrice surveyed 95 freshmen at a local high school. She asked each student if they take a foreign language class and play in the symphonic band. The table shows the results of her survey.

	In Symphonic Band	Not in Symphonic Band
Take Foreign Language Class	18	*x*
Do Not Take Foreign Language	7	37

How many freshmen surveyed take a foreign language class but are not in the symphonic band?

- **A.** 33
- **B.** 77
- **C.** 58
- **D.** 51

---

9. Brian gathered data from a sample of students and teachers about whether they want the school to keep or change the current school mascot. The two-way table displays the relative frequencies of the data.

	Students	Teachers
Keep Mascot	0.79	0.47
Change Mascot	0.21	0.53
Total	1.00	1.00

Note: Values in the table are rounded to the nearest hundredth.

Based on the relative frequencies of the table, which two-way table is a possible representation of the data collected?

- **A.**

	Students	Teachers
Keep Mascot	175	16
Change Mascot	13	18

- **B.**

	Students	Teachers
Keep Mascot	179	27
Change Mascot	121	33

- **C.**

	Students	Teachers
Keep Mascot	111	29
Change Mascot	20	23

- **D.**

	Students	Teachers
Keep Mascot	74	15
Change Mascot	20	17

10. A magazine editor gathered data from a sample of male and female readers about whether or not they had used a gift card in the past month. The two-way table shows the data collected.

	Males	Females
Used a Gift Card	75	67
Did Not Use a Gift Card	49	34

When the values in the table are rounded to the nearest hundredth, which table correctly displays the column relative frequency for this data set?

A.

	Males	Females
Used a Gift Card	0.50	0.42
Did Not Use a Gift Card	0.28	0.18

B.

	Males	Females
Used a Gift Card	0.60	0.66
Did Not Use a Gift Card	0.40	0.34

C.

	Males	Females
Used a Gift Card	0.53	0.47
Did Not Use a Gift Card	0.59	0.41

D.

	Males	Females
Used a Gift Card	0.33	0.30
Did Not Use a Gift Card	0.22	0.15

Answers: Construct Two-Way Tables

1. D
2. B
3. B
4. D
5. D
6. B
7. C
8. A
9. D
10. B

Explanations

1. First, subtract 31 from 46 to find the number of people Jeremy surveyed that saw the movie but did not read the book.

$$46 - 31 = 15$$

So, Jeremy surveyed 15 people that saw the movie but did not read the book.

Then, subtract 31 from 45 to find the number of people Jeremy surveyed that read the book but did not see the movie.

$$45 - 31 = 14$$

So, Jeremy surveyed 14 people that read the book but did not see the movie.

Now, subtract 46 from 86 to find the total number of people Jeremy surveyed that did not see the movie.

$$86 - 46 = 40$$

So, Jeremy surveyed 40 people that did not see the movie.

Finally, subtract 14 from 40 to find the number of people that did not see the movie and did not read the book.

$$40 - 14 = 26$$

So, Jeremy surveyed 26 people that did not see the movie and did not read the book.

The table that represents the gathered data must have the following attributes.

- the number 31 located in the "Saw Movie" row and "Read Book" column
- the number 15 located in the "Saw Movie" row and "Did Not Read Book" column
- the number 14 located in the "Did Not See Movie" row and "Read Book" column

- the number 26 located in the "Did Not See Movie" row and "Did Not Read Book" column

Therefore, the following table represents the data Jeremy gathered.

	Read Book	Did Not Read Book
Saw Movie	31	15
Did Not See Movie	14	26

2. Calculate the value of *x* from the table to find how many middle school students surveyed are in the 7th grade and plan to attend the homecoming football game.

A total of 58 middle school students were surveyed. Write an equation to show the sum of the four cells in the table equals 58 and solve for *x*.

$$\begin{aligned} x + 27 + 12 + 8 &= 58 \\ x + 47 &= 58 \\ x &= 11 \end{aligned}$$

So, **11** of the middle school students surveyed are in the 7th grade and plan to attend the homecoming football game.

3. Since there is a column showing that the total relative frequency for each row is 1.00, the given two-way table is a row relative frequency table. Row relative frequencies are determined by dividing the number in each cell of the two-way table representing the original data set by the total number for that cell's row.

To determine which two-way table is a possible representation of the data collected, find the table where the following are true.

- Approximately 43% of restaurants that take reservations offer delivery.
- Approximately 57% of restaurants that take reservations do not offer delivery.
- Approximately 69% of restaurants that do not take reservations offer delivery.
- Approximately 31% of restaurants that do not take reservations do not offer delivery.

Look at the table containing data from 42 restaurants that take reservations and 52 restaurants that do not take reservations.

	Delivery	No Delivery	Total
Reservations	18 ÷ 42 ≈ 0.43	24 ÷ 42 ≈ 0.57	42 ÷ 42 = 1.00
No Reservations	36 ÷ 52 ≈ 0.69	16 ÷ 52 ≈ 0.31	52 ÷ 52 = 1.00

So, the following two-way table is a possible representation of the data collected.

	Delivery	No Delivery
Reservations	18	24

No Reservations	36	16

4. The table that represents the data collected must have the following attributes.

- the number 26 in the "Band" column and the "Choir" row
- the number 32 in the "Not Band" column and the "Choir" row
- the number 43 in the "Band" column and the "Not Choir" row
- the number 19 in the "Not Band" column and the "Not Choir" row

Therefore, table **X** represents the data collected.

5. To find the row relative frequency of the data, calculate the total of each row.

	Knew	**Did Not Know**	**Total**
Family Members Attending the School	79	42	121
No Family Members Attending the School	12	69	81

Now, calculate the row relative frequency by dividing each value by the row total. Round each quotient to the nearest hundredth.

	Knew	**Did Not Know**
Family Members Attending the School	0.65	0.35
No Family Members Attending the School	0.15	0.85

6. Calculate the value of *x* from the table to find how many students surveyed are female and have not ridden a horse.

A total of 61 students were surveyed. Write an equation to show the sum of the four cells in the table equals 61 and solve for *x*.

$$\begin{aligned} 9 + 16 + 28 + x &= 61 \\ 53 + x &= 61 \\ x &= 8 \end{aligned}$$

So, **8** of the students surveyed are female and have not ridden a horse.

7. The table that represents the results of the poll must have the following attributes.

- the number 11 in the "Tablet" column and the "Gaming System" row
- the number 12 in the "No Tablet" column and the "No Gaming System" row
- the number 3 in the "No Tablet" column and the "Gaming System" row
- the number 49 in the "Tablet" column and the "No Gaming System" row

Therefore, table **X** represents the results of the poll.

8. Calculate the value of *x* from the table to find how many freshmen surveyed take a foreign language class but are not in the symphonic band.

A total of 95 freshmen were surveyed. Write an equation to show the sum of the four cells in the table equals 95 and solve for *x*.

$$\begin{aligned} 18 + x + 7 + 37 &= 95 \\ 62 + x &= 95 \\ x &= 33 \end{aligned}$$

So, **33** of the freshmen surveyed take a foreign language class but are not in the symphonic band.

9. Since there is a row showing that the total relative frequency for each column is 1.00, the given two-way table is a column relative frequency table. Column relative frequencies are determined by dividing the number in each cell of the two-way table representing the original data set by the total number for that cell's column.

To determine which two-way table is a possible representation of the data collected, find the table where the following are true.

- Approximately 79% of students want the school to keep the mascot.
- Approximately 21% of students want the school to change the mascot.
- Approximately 47% of teachers want the school to keep the mascot.
- Approximately 53% of teachers want the school to change the mascot.

Look at the table containing data from 94 students and 32 teachers.

	Students	**Teachers**
Keep Mascot	74 ÷ 94 ≈ 0.79	15 ÷ 32 ≈ 0.47
Change Mascot	20 ÷ 94 ≈ 0.21	17 ÷ 32 ≈ 0.53
Total	94 ÷ 94 = 1.00	32 ÷ 32 = 1.00

So, the following two-way table is a possible representation of the data collected.

	Students	**Teachers**
Keep Mascot	74	15
Change Mascot	20	17

10. To find the column relative frequency of the data, calculate the total of each column.

	Males	Females
Used a Gift Card	75	67
Did Not Use a Gift Card	49	34
Total	124	101

Now, calculate the column relative frequency by dividing each value by the column total. Round each quotient to the nearest hundredth.

	Males	Females
Used a Gift Card	0.60	0.66
Did Not Use a Gift Card	0.40	0.34

English Language Arts

Grade 8 English Language Arts: Textual Evidence in Literature

Kevon was determined to pin Cameron's arms to the ground, but Cameron was doing everything in his power to keep that from happening. The fact that the two boys were tussling in an elevator didn't help Kevon's plight at all. And his little sister's screaming was disrupting his concentration.

"Oh my goodness! Would you two just stop it already? There's not enough room in this tiny elevator for you to fight," Kelly screamed. "Could you at least wait until we get out of here?"

"Okay, okay! If you agree to stop that screaming, we'll stop fighting," Cameron said.

Kevon never thought he'd see the day when the school bully was taking orders from a little girl. He wasn't sure if he could trust Cameron's word.

"I never thought I'd see the day Cameron Maines would let a girl tell him what to do," he said.

"Dude, nobody tells me what to do," Cameron said, pushing Kevon's shoulder. "I stopped because I have a little sister at home, and I never let her see me fight."

"You mean your parents have more kids?" Kevon said. *I'm going to have to teach Kelly how to defend herself sooner than I anticipated,* he thought.

"I just have one little sister, and we're close," Cameron said. "Kelly, I'm sorry for behaving this way in front of you."

"I never would have guessed you had any soft spots," Kevon blurted out before he even realized it. "I mean, you just don't seem like you let people get close to you."

Cameron sighed. "I am very close to my family. I don't think people realize what it's like to be me."

"You mean what it's like to be the strongest, tallest kid in the whole school?" Kevon laughed. "Do tell!"

"I have been the biggest, tallest person in school for as long as I can remember. People made fun of me until I started standing up for myself," Cameron said. "I wasn't always mean. I just give people what they expect."

"You shouldn't be mean to people because that's what they expect," Kelly chimed in. "You should just be yourself."

"Kelly, you're a lot wiser than I give you credit for," Kevon said.

"I have tried being nice to people before," Cameron replied. "And I wound up eating lunch alone anyway. People were afraid I was trying to play a joke on them."

Wow, I had no clue Cameron felt that way, Kevon thought. *Puts things in a different light. He doesn't seem so scary after all.*

Just then the elevator doors creaked open.

"Are you kids okay?" a voice said.

"Yes, we are! Thank you so much for coming," Kelly said.

"You must've been the one who called for help?"

"Wait, how did you call them?" Cameron said.

"I used the emergency phone in the elevator," Kelly replied. "You two were so busy wrestling that you missed it."

"Wow, you really are just like my little sister Claire." Cameron laughed. "You two would get along great."

"You'll have to introduce us sometime," Kelly said.

"Well, I guess I will see you around school," Cameron mumbled.

"Hey, do you want to go to the pizza parlor with us to grab a slice?" Kevon asked.

"Are you sure you want me to come with you?"

"I insist!" Kelly said. "You should also invite Claire."

"That sounds like a great idea. We can compare notes on our bratty little sisters!" Kevon laughed.

“Kevon!” Kelly screamed.
Cameron and Kevon looked at each other and laughed.

1. From the passage, the reader can tell that

- **A.** Kevon will fight Cameron at the pizza parlor.
- **B.** Kevon's little sister is very sharp.
- **C.** The elevator people heard Kelly's screams.
- **D.** Cameron is worried what Kevon thinks of him.

---

2. Which quote from the passage supports the idea that Cameron thinks highly of his sister Claire?

- **A.** *I'm going to have to teach Kelly how to defend sooner than I anticipated.*
- **B.** "Okay, okay! If you agree to stop that screaming, we'll stop fighting."
- **C.** "I stopped because I have a little sister at home, and I never let her see me fight."
- **D.** "Wow, you really are just like my little sister Claire."

---

3. What can be inferred from the evidence in the passage?

- **A.** Cameron is afraid of Kevon.
- **B.** Kelly and Kevon fight a lot.
- **C.** Kelly is the smarter sibling.
- **D.** Cameron is really a nice guy.

Summer Travels

Charlie and his older brother, Bryan were driving to Washington, D.C.—the first week of Summer Break—-with their parents' minivan for a two–week excursion. This was the first time that the boys had ever ventured out without the supervision of their parents or the company of their three younger siblings. They were excited to be free to explore.

"We've finally reached the National Monument Charlie, wake up!" Bryan screeched.

As his brother wiped his face and sat upright in the back of the minivan, he looked around and responded cheerfully— "By the looks of things, today is going to be an awesome day!"

The brothers scoured the streets near Foggy Bottom, until they were able to find public parking not too far from the State Department building. They realized they'd have to do some walking but that was what the trip was all about.

"We've never vacationed outside of Georgia so this is going to be an experience to add to my photo essay for American Government."

Puzzled, Bryan turned and squinted his eyes. "I never had to write one of those in American Government, that actually sounds painful!" Bryan sneered.

"Really, Bryan?" remarked Charlie.

The tension between the two brothers quickly mounted, when Bryan blurted out, "Not only do you have to write an essay about your summer, but pictures too? I'd skip it!"

Prepared to retort something back at his brother with as much cutting sarcasm, Charlie shook his head and looked out the window. *Can I really enjoy the moment, when this means taking pictures for my essay?*

Discouragingly, Charlie unbuckled his seat belt and gathered his things. Understanding that they had planned their vacation out and had dedicated time for everything, including visiting their aunt Chelsea in Boston the next day, Charlie collected himself quickly.

Almost quizzically, Bryan thought about the exchange of words he had with Charlie. *I wonder if I said too much to him and now he's discouraged about this? He always gets so wrapped up in school!*

Shaking his thoughts off, Bryan yelled out to Charlie to get things moving.

Accepting that he'll have to shake this one off, Charlie climbed out of the car.

"Bry, you always have a way of trying to psyche me out, but not today! This is great experience for a future photojournalist!"

Bryan smiled and nodded his head, accepting that he could easily turn the situation around for the worse.

"Make sure you grab the camera and its strap, you're taking pictures, no excuses!" remarked Charlie.

"Sure! I owe you. . . I said a lot, its just that you're a teenager, have fun!" Placing one arm around Charlie and waving the other in the air, Bryan smiled. "Let's go buddy!"

The brothers walked the distance from where they parked to the monument arm in arm. Realizing that they were only a few hours from Boston, they jokingly shared about how they planned to extend their vacation and stay a while longer.

4. Which sentence from the passage supports the idea that Charlie and Bryan have a great relationship?

- ○ **A.** Really, Bryan?" remarked Charlie.
- ○ **B.** We've finally reached the National Monument Charlie, wake up!
- ○ **C.** Bry, you always have a way of trying to psyche me out, but not today!
- ○ **D.** Placing one arm around Charlie and waving the other in the air, Bryan smiled.

5. From the passage the reader can tell that

- **A.** Bryan is confused about why Charlie has to complete a photo essay when he is on summer break.
- **B.** Bryan is thrilled about hearing that Charlie has to use his summer vacation to do homework.
- **C.** Charlie is excited that he will be able to forget about his photo essay because he is on summer break.
- **D.** Charlie is frustrated that he has to spend his summer vacation working on a photo essay.

---

6. Which can be inferred from the passage?

- **A.** Both Bryan and Charlie are having problems because of their different points of view.
- **B.** Both Bryan and Charlie are thrilled to be exploring without their parents around.
- **C.** Bryan is more focused on school and his future career, while Charlie is more carefree and enjoys having fun.
- **D.** Bryan is more carefree and enjoys having a good time and Charlie is more focused on school and his future career.

Jennifer's Woes

Patricia knew she would have to hurry if she wanted to reach school on time, and she did not want to be late on the first day of the new term. While she was walking to the garage, she saw her friend Jennifer sitting on the porch of her house. She was still in her pajamas, sitting with a defeated look on her face. "You did it again, Jennifer, right?" she asked in an irritated tone.

Jennifer shrugged her shoulder and said, "It isn't my fault today—it's so windy that I didn't imagine that the door would shut so fiercely."

Patricia sighed loudly, taking out her cell phone and her house keys from her bag. "Here, call your mom, and in the meantime, here are the keys," said Patricia, hugging her friend. "I just wish you were more careful, Jenny. I have to rush now, so call your mom soon."

7. Based on the evidence in the passage, which statement is **most likely** true?

- **A.** Jennifer usually waits on the porch to see her friend.
- **B.** Patricia will stop talking to her friend.
- **C.** Patricia will be late for work again.
- **D.** Jennifer has locked herself out of her house.

Lightning rippled across the sky just as a loud crack of thunder roared. Mark sighed and released the blinds as he pushed the curtain back closed. “I guess we aren’t going four-wheeling today after all,” he said to himself.

This was supposed to be a big weekend for Mark and his big brother, Mario. Ever since he had gone to high school, Mario was too busy hanging out with his new friends to play games with Mark. Mark was still in shock from Mario asking him to do something on a Saturday. “Now, I will never get my big brother back,” he mumbled and flopped onto the sofa.

“What’s wrong, Little Bro?” Mario asked when he saw Mark sulking. “You sad I’m not going to be able to beat you at four-wheeling today?”

“Mario, what are you doing here?” Mark asked. “I figured you’d be out at the mall hanging out with your friends or something.”

“Huh? I thought we were supposed to hang out today?” Mario said, quizzically.

“We can’t go four-wheeling. There’s lightning outside.” Mark replied. “Just be thankful you got off the hook. Now you can find something to do with your friends instead of spending your Saturday with your bratty little brother.”

“What?” Mario asked. “Do you really think I only offered to hang out with you out of obligation? If I wanted to be with my friends, I would be!”

Mark turned to face Mario and squinted at him. “Well, then why did you offer?”

“Um, because you’re my little brother, and I have no idea what is going on in your life?”

8. What conclusion can the reader draw from the information in this passage?

- **A.** Mark was looking forward to spending time with his older brother.
- **B.** Mario always breaks his promise of going four-wheeling with Mark.
- **C.** Mario is concerned about helping Mark become as popular as he is.
- **D.** Mark's favorite activity to do with his big brother is four-wheeling.

adapted from **Black Beauty: The Autobiography of a Horse**
by Anna Sewell

I had of course been used to a halter and a headstall, and to be led about in the fields and lanes quietly, but now I was to have a bit and bridle; my master gave me some oats as usual, and after a good deal of coaxing, he got the bit into my mouth, and the bridle fixed, but it was a nasty thing! Those who have never had a bit in their mouths cannot think how bad it feels; a great piece of cold hard steel as thick as a man's finger to be pushed into one's mouth, between one's teeth, and over one's tongue, with the ends coming out at the corner of your mouth, and held fast there by straps over your head, under your throat, round your nose, and under your chin; so that no way in the world can you get rid of the nasty hard thing; it is very bad! Yes, very bad! At least I thought so; but I knew my mother always wore one when she went out, and all horses did when they were grown up, and so, what with the nice oats, and what with my master's pats, kind words, and gentle ways, I got to wear my bit and bridle. Next came the saddle, but that was not half so bad; my master put it on my back very gently, while old Daniel held my head; he then made the girths fast under my body, patting and talking to me all the time; then I had a few oats, then a little leading about; and this he did every day till I began to look for the oats and the saddle. At length, one morning, my master got on my back and rode me round the meadow on the soft grass. It certainly did feel strange; but I must say I felt rather proud to carry my master, and as he continued to ride me a little every day I soon became accustomed to it.

9. Which phrase from the passage shows that Black Beauty cares for his master?

- ○ **A.** but I must say I felt rather proud to carry my master
- ○ **B.** this he did every day till I began to look for the oats and the saddle
- ○ **C.** my master put it on my back very gently
- ○ **D.** and gentle ways, I got to wear my bit and bridle

"If I had to pick one book that has had a major impact on me, it would be *The House on Mango Street*," Hope said, staring at the floor and picking at the hem of her dress.

"Hope, I would love for you to tell us why that is, but first, I want you to lift your head and stand up straight," Ms. Richardson said. "You know no one here is going to bite you, right? This room is full of the same people who have been with you all year."

"Yes ma'am," Hope replied. She took a deep breath and looked out at her audience. The room was filled with students who looked terrified. *I guess that's one of the benefits of having to go first,* she thought. *Everyone is so worried about speaking in front of the class that no one is really listening.*

"Are you ready?" Ms. Richardson asked.

Hope nodded and started again. "The reason why *The House on Mango Street* is my favorite book we've read this year is because of Esperanza," Hope said slowly. "First of all, her name is the same as mine because 'Esperanza' means 'hope' in Spanish."

"I have always really wanted to be a writer, and the way Sandra Cisneros organized the book with each chapter as a different story really impressed me," she continued. "I never thought I could write a whole book, but *The House on Mango Street* has changed what a book looks like for me."

From the corner of her eye, Hope could see a smile on Ms. Richardson's face.

"The 'Papa Who Wakes Up Tired in the Dark' chapter was one of my favorites because it reminded me a lot of my dad. He works very hard like Esperanza's dad."

The more Hope talked about *The House on Mango Street*, the less afraid she was. She was so excited that some of her classmates actually sat up and appeared to be listening to what she had to say. Before she knew it, her book report was over. And she didn't faint like she thought she would.

"See, that wasn't as hard you thought it would be, was it?" Ms. Richardson said, interrupting Hope's thoughts. She gave Hope a pat on the back.

"It sure wasn't," Hope said.

10. What can be inferred from the passage?

- ○ **A.** Hope identifies with the character of Esperanza.
- ○ **B.** Ms. Richardson wanted to be a writer, too.
- ○ **C.** Hope also lives in a house on Mango Street.
- ○ **D.** Cisneros is Ms. Richardson's favorite writer.

Answers: Textual Evidence in Literature

1. B
2. C
3. D
4. D
5. A
6. D
7. D
8. A
9. A
10. A

Explanations: Textual Evidence in Literature

1. The reader can tell from the passage's dialogue that Kelly is a smart little girl. She gets the boys to stop fighting using logic . She calls for help, and Kelly gets to the root of Cameron's bullying problem.

2. Cameron stops the fight and apologizes to Kelly because he has a little sister of his own. He says he never fights in front of his sister, Claire, so he would not fight in front of another person's little sister.

3. In the passage, Cameron tells Kevon and Kelly that he gives people what they expect by bullying them. This implies that he does not bully them just because he enjoys it.

4. Bryan and Charlie have a conversation where they discuss Charlie's summer photo essay assignment and they seem to have different points of view. While there is tension, they both pause to reflect and ultimately they reconcile by noticing their differences. Therefore the correct answer is "Placing one arm around Charlie and waving the other in the air, Bryan smiled."

5. Bryan and Charlie are in Washington, D.C. enjoying their summer and Charlie mentions having to work on his photo essay. Bryan points out how challenging thinking about school work is while Charlie should be having fun. Therefore, correct answer is "Bryan is questioning why Charlie has to complete a photo essay when he is on summer break."

6. The passage opens up with the Bryan informing Charlie that they had arrived at the Washington Monument. The two boys exchange words and it becomes clear that they both see school differently. Therefore, the correct answer choice is "Bryan is more carefree and enjoys having a good time, while Charlie is more focused on school and his future career."

7. The passage says that Jennifer is still in her "pajamas" and is sitting on the porch with a "defeated look on her face." Patricia gives her house keys and cell phone to Jennifer so that she can call her husband. The reader can, therefore, conclude that "Jennifer has locked herself out of her house."

8. When Mark discovers that it is raining outside, he is disappointed that he won't get to go four-wheeling with Mario. Then, he says " 'Now I will never get my big brother back.' " From this, the reader can tell that Mark was looking forward to spending time with Mario.

9. Black Beauty does not like the bit and bridle his master is putting on him. Even though he didn't mind the saddle as much, it felt strange. However, he became accustomed to it and "felt rather proud to carry" his master. If he didn't care for his master, he wouldn't have been so quick to accept these changes.

10. Hope says she likes *The House on Mango Street* because of Esperanza. Their names have the same meaning, and Hope also compares her dad to Esperanza's father. The reader can tell that she identifies with the character in the book.

Grade 8 English Language Arts: Story Elements

from **The Jungle Book** by Rudyard Kipling

All that is told here happened some time before Mowgli was turned out of the Seeonee wolf-pack. It was in the days when Baloo was teaching him the Law of the Jungle. The big, serious, old brown bear was delighted to have so quick a pupil, for the young wolves will only learn as much of the Law of the Jungle as applies to their own pack and tribe, and run away as soon as they can repeat the Hunting Verse: "Feet that make no noise; eyes that can see in the dark; ears that can hear the winds in their lairs, and sharp white teeth—all these things are the marks of our brothers except Tabaqui and the Hyena, whom we hate." But Mowgli, as a man-cub, had to learn a great deal more than this. Sometimes Bagheera, the Black Panther, would come lounging through the jungle to see how his pet was getting on, and would purr with his head against a tree while Mowgli recited the day's lesson to Baloo. The boy could climb almost as well as he could swim, and swim almost as well as he could run; so Baloo, the Teacher of the Law, taught him the Wood and Water laws: how to tell a rotten branch from a sound one; how to speak politely to the wild bees when he came upon a hive of them fifty feet aboveground; what to say to Mang, the Bat, when he disturbed him in the branches at midday; and how to warn the water-snakes in the pools before he splashed down among them. None of the Jungle People like being disturbed, and all are very ready to fly at an intruder. Then, too, Mowgli was taught the Strangers' Hunting Call, which must be repeated aloud till it is answered, whenever one of the Jungle People hunts outside his own grounds. It means, translated: "Give me leave to hunt here because I am hungry"; and the answer is: "Hunt, then, for food, but not for pleasure."

All this will show you how much Mowgli had to learn by heart, and he grew very tired of repeating the same thing a hundred times; but, as Baloo said to Bagheera one day when Mowgli had been cuffed and had run off in a temper: "A man's cub is a man's cub, and he must learn all the Law of the Jungle."

1. Which of the following statements warns of an impending danger to Mowgli?

- **A.** All that is told here happened some time before Mowgli was turned out of the Seeonee wolf-pack.
- **B.** None of the Jungle People like being disturbed, and all are very ready to fly at an intruder.
- **C.** A man's cub is a man's cub, and he must learn all the Law of the Jungle.
- **D.** Give me leave to hunt here because I am hungry"; and the answer is: "Hunt, then, for food, but not for pleasure."

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2. Which of the following statements **best** describes why Baloo preferred Mowgli over the young wolves?

- **A.** Then, too, Mowgli was taught the Strangers' Hunting Call, which must be repeated aloud till it is answered
- **B.** All this will show you how much Mowgli had to learn by heart, and he grew very tired of repeating the same thing a hundred times.
- **C.** The big, serious, old brown bear was delighted to have so quick a pupil, for the young wolves will only learn as much of the Law of the Jungle as applies to their own pack and tribe.
- **D.** The boy could climb almost as well as he could swim, and swim almost as well as he could run; so Baloo, the Teacher of the Law, taught him the Wood and Water laws.

Impressions

by Jon Caswell

Betty had sat quietly through the entire freshman orientation. This program was designed to help students understand what to expect from their freshman year. There were so many new students, and she was reluctant to stand out by asking a question. The last part of the program, a question-and-answer panel of professors, had already started. Nobody had asked the question she was most curious about. Betty raised her hand and asked, "What can students do to impress their professors?"

The members of the panel looked at each other quizzically. Finally, Professor Weingarten, one of the oldest members of the panel, responded, "Be late."

"Be late?" Betty responded.

"That's right, nothing impresses a teacher, or employer, for that matter, as much as someone who is late," the history teacher said. "I never forget a student who is chronically late to my class. In fact, in my classes, those students always get a minus on their letter grades. Even if they've earned an A, they get an A-."

Tom, a freshman sitting near Betty, jumped up. "That isn't fair," he said. "If they earn an A, they should get an A. They obviously didn't miss anything important by being late."

Professor Weingarten eyed the young man. "I don't downgrade them for knowledge," he said. "I downgrade them for rudeness. Being late is just plain rude, and rudeness has its reward."

A female student named Ellen shouted, "It still isn't fair."

Professor Weingarten turned to the whole group. "I don't know if this is fair or not, but I do know that it is not okay to be rude to people, your teachers included. If you want to impress someone, treat them rudely, and they will remember you. Guaranteed."

The professor turned back to Betty. "Now, if you want to impress a teacher *positively*, that's easy, be on time and be prepared."

"Thank you, sir, I think I understand," Betty said and sat down.

3. What event best helps Betty understand how she can make a good impression at school?

- ○ **A.** when the students challenge the professor's grading policy
- ○ **B.** when Betty listens to the questions from other students
- ○ **C.** when Professor Weingarten laughs at the students' attitudes
- ○ **D.** when the professor talks about rudeness having consequences

The Rescue

Eva walked along the path next to the lake, enjoying the sunshine and the twittering of the birds. It was the last day of her summer vacation, and she would be going back to school tomorrow. Eva had always been afraid of water, so she had resolved to get over her fear by learning to swim over the summer. As she walked further, she suddenly heard a splash and a cry behind her. Turning around, she saw that a girl, who looked to be no older than her, had fallen into the lake and was struggling to stay afloat.

Eva knew she had to save the girl but she froze because she was still apprehensive about jumping into the water. She took a deep breath and recalled the words of her swim coach, "The important thing to remember is to keep calm, because the water is tricky, but it can be your friend if you just keep calm. Take a deep breath and plunge right in. Now, move your arms like I showed you—strong, broad strokes."

Keeping her coach's words in mind, Eva jumped into the lake, swam toward the girl, then held on to her and swam back to the shore. Eva heaved a deep sigh of relief as the girl she had just saved hugged her and thanked her for coming to her rescue. She introduced herself as Chloe and revealed that she had just moved to the town from another city. "I'm starting school tomorrow at Lincoln High," she said. "That's the school I go to as well!" said Eva excitedly.

4. Based on the plot and dialogue of the story, what is the most likely outcome?

- ○ **A.** Eva and Chloe become friends.
- ○ **B.** Eva decides that swimming is dangerous.
- ○ **C.** Eva becomes a swim coach.
- ○ **D.** Eva and Chloe never see each other again.

The Two Sisters

CHARACTERS:
PERCY, an eighth grade student and Ruth's elder sister
RUTH, a second grade student and Percy's younger sister
MOM, Percy and Ruth's mother

Scene 1:

Stage Set: A room with pink wallpaper. Ruth is sitting on the bed and turning the pages of a book, with an expression of awe on her face.

PERCY: *(shouting angrily)* Ruth, what are you doing in my room? Haven't I told you umpteen times to not touch my books?

RUTH: *(tearfully)* I was only looking at the pictures in your book because they are so colorful and pretty.

PERCY: Well, now that you have seen them, out you go! And next time, don't touch my belongings without asking me.

(Ruth leaves with a hurt expression on her face.)

Scene 2:

Stage Set: A shoe shop in a busy street, where Percy and Ruth have come to shop with their mom.

MOM: Only one of you can buy a pair of shoes this month, as all the shoes in this shop are way more expensive than I had thought. *(Takes Percy to a corner and speaks to her softly.)* Percy, since you're the older one, I think you should let your baby sister buy a pair this time. You can buy your favorite shoes next month, can't you, darling?

RUTH: *(hears their conversation)* No, Mom, let Percy buy these shoes now, so she can wear them to the party next week, and I'll buy a pair for myself next month.

PERCY: *(hugging Ruth)* Well, you are the best sister in the world!. I realize I have been so mean to you, and I am truly sorry for my behavior. I'll try to be a better sister to you. *(Ruth smiles broadly, hugging her sister back.)*

5. At the end of the story, what does the dialogue reveal about Ruth's character?

- ○ **A.** Ruth is pretending to be nice to Percy as an ulterior motive.
- ○ **B.** Ruth wants to buy better shoes from another shop.
- ○ **C.** Ruth thinks buying shoes later will make Percy like her more.
- ○ **D.** Ruth is nice to Percy, even though Percy was mean to her.

Hit and Miss

Duncan drew a deep breath and tightened his grip around the bat as the ball shot toward him. *Oh no, I think I'm going to miss this one too*, he thought to himself. He swung his bat as hard as he could . . . and he missed. He was in the backyard with his friend Mario, who was helping him practice for the baseball tryouts at school the next day.

"I don't think I should even try, Mario, because I'm clearly not getting any better at this, and I don't want to make a fool of myself in front of a whole bunch of people tomorrow."

"I'm sure you'll do better with more practice, and if you want, I can stay for a while longer and help you."

"No, you should go home, Mario, but thanks for trying to help me."

After Mario left, Duncan went inside his house, looking miserable. His older brother Dwayne was sitting at the kitchen table, and when he saw Duncan's face, he asked what was wrong.

"The baseball team at school is having tryouts tomorrow and I really want to get in, but there's just one tiny problem: I'm terrible at baseball."

"Hey, that's not true and you know it. I've seen you swing the bat and you've got good skills, little brother. Come on, let's go back outside and I'll help you."

Reluctantly, Duncan followed Dwayne outside, but when Dwayne threw the ball, Duncan missed once again.

"You're overthinking this, Duncan, and I can see that in your face. Even before the ball reaches you, you're already assuming you're going to miss. Stop doubting yourself and swing with confidence."

Dwayne threw the ball again, and this time, Duncan managed to hit the ball, though he did not hit it hard enough.

"Well done, but let's try again, and this time, I want you to focus and clear your head. Don't think about anything except the ball that's coming toward you, okay?"

This time, Duncan swung his bat and sent the ball flying across the yard. He cheered and punched the air, as Dwayne looked on, laughing. They practiced for a while longer, and Duncan did not miss a single ball.

"Forget the school tryouts! I think I should just join one of the state baseball teams now," Duncan said to Dwayne, with a twinkle in his eye.

"That's the spirit, little brother!" Dwayne replied, patting Duncan on the back.

6. Duncan jokes about joining one of the state baseball teams because

- ○ **A.** he wants to show everyone what he is capable of.
- ○ **B.** he believes he is good enough to play for the state.
- ○ **C.** he dreams of becoming a famous baseball player.
- ○ **D.** he finally gains confidence in his skill at baseball.

A Night with the Newtons

I arrived at the Newtons' home with a bowling ball in the pit of my stomach. It was my first real babysitting job, and I had no idea what would happen. *What if the two kids are monsters?* I thought to myself.

"Charlotte! Come in! Come in! Make yourself at home," Mrs. Newton greeted me at the door. She guided me to the living room where a 9-year-old girl sat reading. "Marla, this is our new babysitter, Charlotte."

"It's nice to meet you, Marla," I said, sticking out my hand.

Marla took it and peered shyly up at me. Her short, straight hair was dark brown, just like her mother's.

"Where is your brother?" Mrs. Newton asked.

Marla pointed to the coat closet with a smirk.

Mrs. Newton shook her head in disbelief and amusement as she marched to the closet. "Boo!" she cried as she opened the door. She lifted a blonde-haired boy and started tickling him. "And this—little one—is Nick," she said between his giggles. As soon as Nick saw me, he buried his face into his mother's shoulder and hugged her like he never wanted to let go.

Mrs. Newton, however, disengaged him and set him on the floor. "Now, I'll only be gone for a couple of hours." She grabbed her coat and purse and began reciting the last-minute instructions. "The emergency numbers are on the fridge. Nick needs to be in bed by eight, and Marla's bedtime is ten. There are chicken nuggets and fries in the freezer that you can bake for dinner. I should be home by eleven. If you need anything, just call me on my cell, ok?"

"Ok, I will," I answered. I watched as she kissed her kids goodbye, and before we knew it, she was gone.

As soon as the door shut, Nick started crying. "Mommmmyyyyyy!" He ran to the door and screamed, hoping that she would change her mind and come back.

I quickly went to him and tried to pick him up and soothe him, but he wouldn't let me touch him. He just gave me the evil eye and screamed even louder.

"Nick," I said calmly, "your mom will be home soon. How about we color? I hear that you love markers! I actually brought some coloring books just for you!"

That certainly got his attention. He wiped the tears from his eyes and nodded. I spread the markers and coloring books on the coffee table, and together, we began brightening the black and white pictures of various critters. "Do you want to join us, Marla?" I asked.

She shook her head and continued reading her book.

I glanced up at the clock and saw that it was almost seven. "I guess I should start making dinner," I said to the kids. "Chicken nuggets and fries sound good?"

Marla nodded, and Nick completely ignored me. He was too busy coloring—his feet!

"Oh, Nick! What are you doing?" I cried. Thank goodness he hadn't gotten up to walk around, or I would've spent most of the night scrubbing footprints out of the carpet. I quickly picked him up and carried him to the bathroom.

Upon taking a closer look, I noticed that he not only colored his feet, but his hands and stomach as well! How he found the time to color these things without me noticing is beyond me. I laughed at his mischievousness. I really needed to keep my eye on this one.

7. Which event gets Nick to stop crying?

- **A.** Charlotte runs to him and picks him up to soothe him.
- **B.** Charlotte carries Nick to the bathroom to wash him.
- **C.** Charlotte asks him if he wants to color with markers.
- **D.** Charlotte makes chicken nuggets and fries for dinner.

The Movie Day

by A. Gautam

Movie day was my favorite time of the month. This time, my dad was taking the whole family to see *Tale of Tarot*. I'd always wanted to be like Tarot, the 14-year-old girl who saved the world. Tarot's dad was a red-haired superhero and my dad was no less. I loved the way my dad's wavy red hair flowed in the air and his deep hazel eyes glowed in the sunlight. He had a soft heart for a big guy.

As soon as we reached the theater, Mom had her hands full with Tara and Derrick, my five-year-old twin siblings. I detangled myself from the mess of my seatbelt and saw that Dad was already at the ticket window. The movie was going to start in five minutes, so I was hoping Tara wouldn't see the refreshment stands. Unfortunately, Tara was eagle-eyed and saw the popcorn from yards away.

"Daddy, kettle-cooked!" Tara yelled at the top of her lungs. Dad smiled. Tara would cry throughout the movie if she didn't get some popcorn, and nobody wanted that.

"Alright, kiddos, I'll be back in a jiffy," Dad said, giving in. I followed Dad to the popcorn stand, where other parents were yielding to kids' demands. I just knew we were going to miss the first five minutes, and the opening scene was supposed to be the best part of the movie. Never had I hated popcorn more. *Why does Tara have to be so spoiled?* I whined to myself.

As soon as he could, Dad bolted from the stand, motioning for me to follow him inside the theater. We flowed with the swarm of last-minute moviegoers. I did my best to trail Dad through the dark hallway.

My last scrap of hope vanished as I spotted Tarot on the big screen. The opening scene was now long over. I watched Tarot swing her sword on top of a snowy mountain and plopped down into my seat. I tried to connect the dots of the plot, but my eyes were fruitlessly trying to find Tarot between the multiple heads blocking my view. Two kids were yelling about 10 rows ahead of me. Then, the biggest guy in the world got up from his seat to look around for something, and if that wasn't distracting enough, a woman seated next to the kids began to shriek.

I couldn't understand a word they were saying.

"Dad, tell them to be quiet," I whispered in my dad's ears. Then, I heard a strange rough voice in my ears.

"Who are you?" a blonde man with blue eyes asked, as bits of popcorn dropped from his mouth.

Suddenly, I understood what the commotion ahead of me was all about. My family was calling my name.

8. Why is the first paragraph important in the story?

- **A.** It tells the reader what the narrator's dad looks like.
- **B.** It makes the reader want to go see a superhero movie.
- **C.** It helps the reader understand children's social behavior.
- **D.** It makes the reader think about his or her own father.

The Beckoning Stage

I have always been fascinated by the stage and often dream of performing in Broadway some day. However, being shy and lacking in confidence, my mirror has been the only witness to my passion and talent. I know that I am talented and often think of joining the drama club at school, but I have never done this because I fear people may laugh at me. I have never been able to muster the courage to audition for any play either—the very thought of it makes me tremble with fear.

One day, I peeped into the auditorium, knowing that the auditions for the year-end play were going on. However, to my surprise, I found the auditorium empty, and I entered hesitatingly. The magnificent stage beckoned me, and the actor in me was drawn to it. I went on stage and decided to act out one of my favorite scenes from *Romeo and Juliet*. With no audience to unnerve me, I was completely at ease, and I became Juliet. I knew the lines perfectly because I had spoken them so often.

As I spoke the last line, I heard applause from a dark corner of the auditorium. I saw a figure coming toward me, and I was in a daze when I saw that it was the drama teacher. She walked up to me and said, "What's your name, hidden talent?" I just mumbled, "Sue." She noted my name in her red diary, told me to meet her the following day, and left the auditorium.

9. Why is it important for this story to take place in an empty auditorium?

- ○ **A.** It helps the shy narrator perform on stage.
- ○ **B.** It helps the shy narrator know that she can act.
- ○ **C.** It provides some comic relief.
- ○ **D.** It creates suspense and tension.

Free Food by C. Vesely

When Kambry arrived to pick up her lunch order, her stomach growled as she inhaled the signature scent of Pal's juicy burgers and fresh french fries. Her mouth watered as she breathed in the spicy aroma of chili powder, cumin, and cilantro. Kambry couldn't wait to take a bite of her favorite burger. The restaurant owner scowled as Kambry tried to hand him her credit card.

"Do you have cash?" the owner asked curtly.

"No, sorry, I don't," Kambry answered.

"My machine's not working," the owner said.

"Okay. I don't want to, but I guess I'll have to get some food somewhere else," Kambry said disappointedly.

"No. Just take it," the owner said as he handed her the bag of food.

"Thank you, sir. I'll tell all of my friends to eat here. The burgers are fabulous, and you are very generous," Kambry said with a warm smile.

The man just frowned and wiped his brow with the back of his hand.

Just then, another customer walked in and wanted to order several burgers and side items. The owner had to explain that his credit card machine was not working. This time, the owner sounded sad instead of irritated. The would-have-been customer said that he didn't have cash and didn't have time to go to an ATM.

Kambry felt an urge to help the restaurant owner. "Excuse me, sir. I know it's none of my business. But do you have a smart phone? If so, you could use an app to charge people's credit cards," Kambry suggested.

"No, I don't have a smart phone. I am struggling to keep my restaurant open, and I can't afford things like smart phones," the owner said.

Kambry had the day off from school and had planned to play tennis with her friend. But she felt as though helping the restaurant owner was a worthy cause. "I've got a tablet, and I can help you set up an account for accepting credit card payments."

"I couldn't ask you to do that," the owner said.

"You don't have to ask. I'm volunteering," Kambry said.

"You would do that?" the owner asked.

"Yes! I don't want my favorite burger joint to go out of business!" Kambry answered. She pulled her tablet out of her purse and set up the payment application for the restaurant. Kambry stood by the cash register and showed the owner how to charge people's credit cards. She also set up several social media accounts for the restaurant owner and showed him how he could generate business with posts. Kambry also wrote several rave reviews about Pal's Burgers on different food sites. By the end of the day, the restaurant was crowded with customers. Kambry's online marketing was working like a charm.

The owner was so grateful to Kambry that he told her she would never pay for a meal at Pal's Burgers again. Kambry was thrilled with the endless burger supply, but she was even more thrilled that she had discovered her talent for marketing and had used it to help a local small-business owner.

10. How does the dialogue in the story contribute to the plot?

- ○ **A.** It shows how Kambry and the restaurant owner build a relationship.
- ○ **B.** It explains why Kambry likes Pal's Burgers more than other burgers.
- ○ **C.** It describes how Kambry develops a marketing plan for Pal's Burgers.
- ○ **D.** It characterizes Kambry as a simpleminded person who eats a lot.

Answers: Story Elements

1. B
2. C
3. D
4. A
5. D
6. D
7. C
8. A
9. A
10. A

Explanations

1. The line, "None of the Jungle People like being disturbed, and all are very ready to fly at an intruder" is the only line that indicates a possible danger to Mowgli if he does not learn the laws of the jungle well.

2. According to the passage, "The big, serious, old brown bear was delighted to have so quick a pupil." Baloo believes that Mowgli is much more devoted to learning than the young wolves, who leave as soon as they learn the rules of their own pack.

3. The plot of this story involves Professor Weingarten teaching freshman an important lesson—that being late is being rude and there are consequences for rude behavior. Thus, it is important, in the sixth paragraph, when he explains the lowering of grades for students who are often late.

4. At the end of the story, Chloe reveals that she will be going to the same school as Eva. Since they establish a bond when Eva saves Chloe from drowning, it is evident that the two will most likely become friends.

5. Dialogue is the speech between characters in a story. Dialogue can reveal aspects of characters, propel action, and provoke decisions. The drama shows Percy being mean to Ruth. Yet, Ruth willingly lets Percy buy a new pair of shoes. This shows that Ruth is nice to Percy, even though Percy is rude to her younger sister.

6. In the beginning of the story, Duncan doubts his skill at baseball and even thinks that he should not go for the school tryouts. But by the end of the story, with his brother's help, he regains his confidence and begins to play well. Duncan jokingly tells his brother "Forget the school tryouts! I think I should just join one of the state baseball teams now," which shows that he is finally confident in his skill at baseball.

7. Find the part in the story where Nick is crying. At first, Charlotte tries "to pick him up and soothe him," but this just makes Nick scream even louder. Finally, she says, "How about we color? I hear that you love markers! I actually brought some coloring books just for you!" This gets Nick to stop crying. "He wiped the tears from his eyes and nodded," the story says.

8. The first paragraph of the story is very important for many reasons. In this story, the first paragraph gives a physical description of the narrator's dad. This gives the reader a hint that the people causing commotion in the theater includes the narrator's dad. In addition, when the narrator describes the person she ends up sitting next to in the theater, the reader can tell that he is not her dad.

9. Setting is crucial to a story. In this case, the empty auditorium provides the most appropriate setting for the "shy narrator to perform on stage" and for her talent to be noticed.

10. Dialogue is the speech between characters in a story. This speech can reveal aspects of characters, propel action, and provoke decisions. In this passage, the dialogue shows how Kambry and the restaurant owner build a relationship. At the beginning of the story, the restaurant owner speaks gruffly to Kambry. She speaks politely to the owner. As the story progresses, Kambry offers to help the owner. At this point, the owner speaks more softly. He says to Kambry, "I couldn't ask you to do that." When Kambry volunteers to set up a credit card payment app, he asks, "You would do that?" The dialogue shows the progression of the relationship between the restaurant owner and Kambry.

Grade 8 English Language Arts: Figurative Meanings in Literature

1. **(1)** For decades, the forest, hugging the eastern side of Birch Hollow, had no visitors. **(2)** The villagers there never walked near the forest and never directly looked at it. **(3)** The forest didn't even exist in their conversations. **(4)** The forest was all but invisible until a man emerged from its brush. **(5)** The man's mysterious appearance created unrest within the village. **(6)** The villagers could no longer ignore the forest.

Which sentence from the passage is an example of personification?

- **A.** sentence 2
- **B.** sentence 5
- **C.** sentence 1
- **D.** sentence 4

***excerpt from* The Time Machine**

by H.G. Wells

I don't know if you have ever thought what a rare thing flame must be in the absence of man and in a temperate climate. The sun's heat is rarely strong enough to burn, even when it is focused by dewdrops, as is sometimes the case in more tropical districts. Lightning may blast and blacken, but it rarely gives rise to widespread fire. Decaying vegetation may occasionally smoulder with the heat of its fermentation, but this rarely results in flame. In this decadence, too, the art of fire-making had been forgotten on the earth. The red tongues that went licking up my heap of wood were an altogether new and strange thing to Weena.

2. The flame is a symbol of

- **A.** a brilliant personality.
- **B.** an object of innovation.
- **C.** a complicated problem.
- **D.** an adventurous journey.

Cassie was on her hands and knees and could feel the rough ground against her skin. The night was so dark that Cassie felt blind. She spent a couple minutes moving her hands across the forest floor, trying to find what she had tripped over. Giving up, she stood up and immediately felt dizzy from the sensation of being lost in a void. The nature sounds around her seemed preternaturally loud and menacing. Cassie's heart raced in her chest as it had since she first got lost in the woods.

The gravity of her situation began to sink in. She needed to sit down and wait until sunrise. She could not sleep tonight; she had to stay alert to her surroundings.

Sticking her arms out, Cassie felt her hands brush against a large tree trunk. She squatted down and leaned against the tree. She closed her eyes to help her focus on the sounds around her.

Suddenly Cassie's body jolted. Cassie opened her eyes, but they felt heavy. She silently scolded herself for letting her guard down, but she forgot all about that when she saw the light in the distance. It was faint and far off, but it was definitely glowing. The night was still dark, and Cassie was still alone, but now she felt a renewed strength. She stood up and began the laborious task of moving through the treacherous forest. She kept her gaze toward the light and felt its warm glow inside her.

3. The light is a symbol of what in the passage?

- ○ **A.** hope
- ○ **B.** solitude
- ○ **C.** disorientation
- ○ **D.** fear

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4. Garrett could feel his heart pounding with excitement as he and his friends entered the amusement park. He stood and listened to the rumbling of the nearest roller coaster and the ensemble of sounds from other rides as passengers screamed and shouted in glee and horror.

Use the relationship expressed in the paragraph above to complete the analogy.

Roller coaster is to ride as

- ○ **A.** heart is to pounding.
- ○ **B.** passengers is to park.
- ○ **C.** rumbling is to sound.
- ○ **D.** screamed is to shouted.

Flip's Position

by c.safos

Flip played the guard in high school. It's called
the one spot. Now, he's a statue and stands in one spot
in front of the gas station gathering dust on his shoulders.

The gas pumps barely reach his chin, and he can see over
just about every customer who pulls in for an oil change.
Flip's still fast—checks the oil, airs the tires, and gases the tank

before a customer has a chance to tell him that he looks familiar.
His hands are like wild birds. The same hands that once collected
90 buckets in one game can change a flat tire in 90 seconds.

His knees creak and crackle when he squats to tie his shoes.
At night, he forgets to turn off the neon "open" sign. Flip played
the guard in high school. It's called the one spot.

5. Why does the author use the metaphor "Now, he's a statue and stands in one spot"?

- **A.** to show that Flip is anxious to leave his job and go home
- **B.** to show that Flip stands patiently outside the gas station
- **C.** to show that Flip still plays on a local basketball team
- **D.** to show that Flip is lost and needs help getting back home

A Cold Night

In the cold night, Damon and his father walked silently down the empty city street. The hypnotizing clump, clump, clump, clump of their four shoes echoing off the pavement was the only sound they made. Damon tilted his head at a slight angle to look at his father without getting caught staring. As they passed the dim streetlights, shadows on his father's face shifted and rolled but always shaded his eyes and his mouth.

"So, when do you think you'll be coming to see me again?" Damon asked, trying not to sound like a little kid.

His father did not respond right away. Damon felt a catch in his throat, but in the dark, he was able to hide it well.

"Well, I know you are busy, and so am I," his father said. "Maybe I can see you again in May when you graduate. That is, if I can get the time off work, and if I feel well, and if I can afford the ticket at the time."

Damon nodded. When he imagined his graduation day, he imagined his mother and father together, with him in the middle of their bright, smiling faces. However, Damon knew what his graduation photo would probably look like. His dad would not be in it. His dad always promised to show up, but he usually broke his word. Damon turned to look his father in the eye, but he only saw a heavy shadow where a face should be.

6. The empty street is a symbol of what in the passage?

- ○ **A.** the end of one path in life and the beginning of another
- ○ **B.** the excitement of embarking on a new adventure
- ○ **C.** the lack of a strong relationship between father and son
- ○ **D.** the stress of getting ready for Damon's graduation

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7. Look at the opening of a joke below.

Two pencils competed in a race.

Which of these responses completes the joke with a pun?

- ○ **A.** They forgot their shoes.
- ○ **B.** They ran in major style.
- ○ **C.** The paper was slippery.
- ○ **D.** The result was a draw.

8.

Nadia had seen the best of times and the worst of times in her school. But, she had constantly maintained her grades. When Mrs. Sue came to Woodland High as the new English teacher, things changed for everyone, including Nadia. Mrs. Sue expected her students to be at the Advanced Placement level classes and challenged them each and every day.

It was no surprise when she tested her students' knowledge of world literature on the mid-term. During the quiz, the students were sweating like horses at the finish line of a racetrack on a Texas summer day.

"So, how was it?" Nadia asked her best friend Paul after the test. "Didn't see that coming."

"Oh, I thought it was pleasant," Paul replied, wiping sweat from his brow. "Like a root canal."

Why is Paul's response at the end of the story an example of verbal irony?

- **A.** because Nadia helps him study for the exam
- **B.** because he feels the exam was painfully tough
- **C.** because he knows Nadia is smarter than him
- **D.** because Mrs. Sue can actually hear his response

The Pasture

by Robert Frost

I'm going out to clean the pasture spring;
I'll only stop to rake the leaves away
(And wait to watch the water clear, I may):
I shan't be gone long.—You come too.

I'm going out to fetch the little calf
That's standing by the mother. It's so young,
It totters when she licks it with her tongue.
I shan't be gone long.—You come too.

9. The calf is a symbol of what in the passage?

- **A.** beauty
- **B.** danger
- **C.** hard work
- **D.** innocence

The Mystery of the Box

"You have a good day son. Don't get into any trouble," Lou Trump said as he patted his son Joey's blonde head. "You too, Dad," Joey called out as his father set out for their farm. It was a hot day. The sun was shining brightly and the air was humid. All of Joey's friends — Rick, Harry and Jill —— were out on a camping trip while Joey played alone at home. His father did not allow him to go for the camping trip because someone needed to be home to take care of Mae, Joey's five year old baby sister. Joey's mother Martha was visiting her sister Catherine who had just delivered a baby boy. Catherine lived in a town a few miles away and Martha wasn't expected back home until the next day.

By noon Joey had prepared a simple lunch for Mae and tucked her into her bed for an afternoon nap. Once the toddler was asleep, Joey had nothing better to do. He missed his friends as he hated playing alone. He walked through the empty house aimlessly until he noticed something strange outside the kitchen door that led into the backyard. A three foot cardboard box wrapped in bubble wrap quivered in the wind. Joey eyed the box curiously as he remembered that the box certainly wasn't there when he was preparing Mae's lunch. He picked up the box which wasn't heavy. The label said "222B Baker Street." Joey was puzzled. The last house on the street was 221B. So who was the box for? Should he open it? Was it intended for 221B? That was the house where the Holmes lived. At one time Joey used to be good friends with the Holmes' son Shane. Shane was crazy about puzzles and they would spend hours trying to solve popular puzzles that were notoriously difficult to solve. Once they had solved a real mystery as they helped old Mrs. Garland discover the identity of a prank caller.

With the box in his hand, Joey looked longingly at the Holmes's front porch. Shane could help him solve the mystery of the box. He wanted to knock on the door, but his father had instructed him not to be friends with the Holmes any more. Lou Trump and Chester Holmes had a huge fight last month. Since then the families were feuding like the Montagues and Capulets.

10. What is the **best** reason the author alludes to the detective Sherlock Holmes?

- ○ **A.** to explain why Shane was an important character
- ○ **B.** to explain why Shane was good at solving mysteries
- ○ **C.** to show that Shane and Joey were good friends
- ○ **D.** to show that Shane was a fan of detective fiction

Answers

1. C
2. B
3. A
4. C
5. B
6. C
7. D
8. B
9. D
10. B

Explanations

1. When an author gives human qualities to an inanimate object, it is called personification. In sentence 1, the forest is described as "hugging the eastern side of Birch Hollow." The forest does not really hug the town. Figurative language, like personification, can add depth to a narrative.

2. Symbols are items that represent big ideas and concepts. In this passage, the flame represents "an object of innovation." In the passage, the author describes fire as something than can be used either positively or negatively.

3. Symbols are items that represent big ideas and concepts. Cassie is scared and alone at the beginning of the story. The night is dark, and she does not have hope that she will make it to safety. Then, after a nap, she sees a light in the distance. She feels hope that she can get to safety. Even though things seem bad, Cassie feels strong as she begins walking toward the light.

4. Try to make a sentence showing the relationship between "roller coaster" and "ride" in the passage. Then, choose the answer option that shares the same relationship. If the sentence you make fits with more than one answer option or doesn't fit with any answer option at all, try to think of a different one. A "roller coaster" is a type of "ride." Similarly, "rumbling" is a type of sound.

5. A **metaphor** is a figure of speech that compares two different things. Metaphors **do not use the words "like" or "as."** A metaphor is a figure of speech in which a word or phrase that ordinarily designates one thing is used to designate another, thus making a direct comparison. In this poem, the poet compares Flip to a statue. A statue is a nonliving thing made of stone that mostly stands around in one place for long periods of time. Even though Flip used to play basketball, now he mostly stands around waiting patiently to work. Flip must be patient since the author states that Flip gathers "dust on his shoulders." Statues, much like Flip, can also gather dust since all they do is stand around.

6. Symbols are items that represent big ideas and concepts. The empty street is a symbol of the relationship between father and son. The street is empty just as the relationship is empty. The reader can tell that the father and son do not have a strong relationship. Damon is upset that his father does not see him much. The father makes up possible excuses for why he may not be able to see his son graduate. If the father and son had a close relationship, they would see each other more often.

7. A pun is a humorous use of similar words or phrases to suggest different meanings. The correct answer is a pun because it suggests different meanings through the word "draw." The statements ("Two pencils competed in a race. The result was a draw.") could be interpreted two ways. It could mean that something was drawn with the pencils or that the race was a tie.

8. Verbal irony is when someone says one thing but means something different. The author shows how Mrs. Sue is a tough teacher. The mid-term exam is challenging for everyone. When Paul wipes the sweat from his brow and comments on the pleasantness of the exam, he is being ironic.

9. Symbols are items that represent big ideas and concepts. Baby animals are usually used to represent qualities that humans associate with babies. For example, babies are innocent. The calf in the poem is being watched over by its mother because it is too young and innocent to be on its own.

10. The author draws a connections between Shane and Sherlock Holmes to emphasize Shane's mystery-solving skills.

Grade 8 English Language Arts: Compare Modern and Traditional Texts

Passage 1

from **The King James Version of the Bible**
Joshua 6:1-5

Now Jericho was straitly[1] shut up because of the children of Israel: none went out, and none came in.

And the Lord said unto Joshua, "See, I have given into thine hand Jericho, and the king thereof, and the mighty men of valor. And ye shall compass[2] the city, all ye men of war, and go round about the city once. Thus shalt thou do six days. And seven priests shall bear before the ark seven trumpets of rams' horns: and the seventh day ye shall compass the city seven times, and the priests shall blow with the trumpets.

"And it shall come to pass, that when they make a long blast with the ram's horn, and when ye hear the sound of the trumpet, all the people shall shout with a great shout; and the wall of the city shall fall down flat, and the people shall ascend up every man straight before him."

_____

[1]*straitly*—tightly
[2]*compass*—to form a circle around something

Passage 2

Matthew's Confidence
by Tirzah Tyler

Matthew sat inside his car in the parking lot of Arnold's Chicken Palace. He arrived early for his job interview, and he wanted to make sure his attitude was stellar before going inside the restaurant. Unfortunately, he felt petrified. "I can't do this," he told his mother over the phone.

"Yes, you can, big man," his mother said.

Matthew's hand shook while he pressed his cell phone more tightly against his ear. "All my potential employers have rejected me," he said. "What if nobody hires me?"

"Big man, you can't think small. Remember who you are, remember your abilities, think about what you want, and then go after it. Shout at it if you have to."

"Shout at my potential job?"

"Sure, why not, big man?" his mother replied. "I believe in you, and you can believe in yourself too."

After Matthew ended his phone call with his mother, he spent a few moments calming himself down. *Come on, Matt, you can do this*, he thought to himself. *You'll be the best manager Arnold's Chicken Palace ever had*. While taking deep breaths, he clenched his fists and felt strength surge through his muscular arms.

He closed his eyes and thought about all the other jobs he had interviewed for but did not get. He thought about his bills piling up. He knew this interview would be a very important one. Then he shouted as loudly as he could, "This job is mine!"

Matthew opened his eyes and saw a woman and a little girl walking past his car. They both scurried away with frightened looks in their eyes.

Embarrassed, Matthew waved at them and cleared his throat.

The day after his interview, Matthew received a phone call from the owner of Arnold's Chicken Palace. "I am very pleased to offer you the position of manager at my restaurant," the owner said. "You were a

very impressive candidate for the job," he added. "How did you become such a confident person?"

Matthew clenched his fist and tried to not shout with excitement. With a smile, he replied, "I guess I just believe in myself."

1. How are the patterns of events in both passages **similar**?

- ○ **A.** In both passages, the main character conquers a strong enemy.
- ○ **B.** In both passages, a man achieves a goal after believing in himself.
- ○ **C.** In both passages, an authority figure gives instructions to shout.
- ○ **D.** In both passages, people need to calm themselves before a battle.

Passage 1

The Bundle of Sticks

a retelling of **an Aesop's Fable**

Once, a farmer had three sons who used to constantly argue among themselves. Nothing the father said would stop them, and so he wondered how he could make his sons understand that arguing did not help anyone.

One day, when the sons had finished arguing and were moping gloomily, he asked one of them to fetch him a bundle of sticks. Handing the bundle to each of his sons in turn, he told them to try to break it. Each one tried his best, but no one was able to break it. Then the father untied the bundle and gave the sticks to his sons to break one by one. They could break the sticks very easily.

"My children," said the father, "When you agree with each other and help each other, it will be impossible for anyone to harm you, but if you are divided among yourselves, you will be no stronger than a single stick in that bundle."

The brothers finally understood what their father was trying to tell them all these years and agreed to no longer argue.

Passage 2

The Sun King

The drama club of Spring Valley School was busy preparing for the annual play. This year, the play was called "The Sun King," and Michelle and Jamal were playing the lead roles in the play, while a few other students were part of the choir. The rest of the students were given different tasks, such as getting the stage props ready and helping with the costumes and makeup. All the club members were involved in putting together the play; however, many of them performed their tasks disinterestedly. Some carelessly built the props, while others organized the costumes haphazardly.

Terrence, a high school student, who was in charge of the club, was organizing the play. Three weeks before the final day, they organized a rehearsal. The rehearsal did not turn out well because some students put in a lot of hard work, while others did not cooperate.

Terrence realized that he needed to speak to the club. He called everyone together and made them realize that they needed to cooperate and help each other if they wanted to put on a successful play. He positively encouraged them to do their work well, and this seemed to work. From the next day onward, all the club members worked hard to make the play successful.

The day of the annual play had arrived. The whole club worked hard to get everything ready on time. The club members did their best, and the play turned out to be a grand success. The teachers were very impressed with the students and congratulated them for their united effort.

2. Which theme is found in both passages?

- ○ **A.** People must confront others only when it is necessary.
- ○ **B.** People must be given examples of successful stories for motivation.
- ○ **C.** People must work together for a successful outcome.
- ○ **D.** People must communicate clearly with others to express their needs.

Passage 1

a retelling of **The Man, His Son, and His Donkey** by Aesop

Jacob and his son, Joseph, used to spend all day looking after the animals of other people, but Jacob often used to think he was wasting his time working for other people for a meager salary. He decided he would sell his donkey, and with the money he received, he would buy hens as they would have a higher return value in the future.

One day, Jacob and Joseph set out for the fair to sell their donkey. On the way, they saw some women working in the field.

"These people are ridiculous! They have a donkey, but they are wasting their energy by walking," said one of the women.

Jacob was embarrassed at his foolishness, so he asked Joseph to ride the donkey. On the way, he saw some old people sitting under a banyan tree.

"Ah, what has the world come to! It gives me immense pain to see this uncaring boy sitting on the donkey's back while his old father has to walk," said one of the men sadly.

Jacob admired the man's wisdom and wondered why he did not think of this before. He told his son to dismount, and he sat on the donkey. Joseph and the donkey started walking again, when they passed a group of children bathing in a pond.

The boys laughed loudly and said, "The man has no shame, as he is enjoying the ride on the donkey while his poor tired son can barely walk."

Jacob realized his mistake and pulled the boy up behind him on the saddle, but soon they were stopped by the village chief.

"Don't you both have any sense? How can you both sit on the poor donkey? He looks weaker than you and deserves to be treated with love and care," shouted the chief angrily.

So, Jacob rented a cart from a nearby market, put the donkey on it, and wheeled the cart along, while everyone they passed on the way couldn't stop laughing at them.

Passage 2

The Spanish Class

It was a pleasant evening, and the sky was dotted with several birds flying home in flocks. Michelle was unaware of the beauty of the surroundings as she looked out of the window of the moving bus and thought about her classes. She hated these weekend Spanish classes for she did not have an interest in learning the language. Both her parents had spent their childhood in Spain, and they wanted Michelle to learn and speak fluent Spanish.

"Michelle can visit you all in Spain as soon as she can speak the language," Mom used to say often when she spoke to her aunts and cousins in Spain.

Michelle jolted back to the present when her friend Shashi nudged her to get off the bus.

"Michelle, why don't you tell your parents that you want to join the ballet classes, and you find it difficult to cope with Spanish?" inquired Shashi, as she looked at her friend's brooding expression.

"Hmm . . . I guess I should, but I am sure they won't be pleased," mumbled Michelle.

That night after dinner, Michelle approached her parents and told them about her predicament.

"Michelle, why did you not tell us about this sooner? Remember one thing, dear, that you should not do something because others expect it from you. Everyone deserves to be proud of what they've done, what they've achieved, and you cannot feel that unless you enjoy what you are doing," Dad said in a solemn voice.

Michelle realized she should have confided in her parents sooner and saved herself all the unnecessary worries.

3. How are the characters in both passages **similar**?

- **A.** In both passages, the main characters want to please others.
- **B.** In both passages, one parent wants to prove they listen to their child.
- **C.** In both passages, one character decides to teach other characters a lesson.
- **D.** In both passages, the fathers are shown to be overprotective.

The Gymnast

Kieran took a deep breath, stretched his arms out, looked straight ahead, and began his routine. He covered the length of the floor with his flips and handstands, finally landing gracefully on his feet. Looking pleased with himself, he glanced over at his trainer, Jason Lang, a tall and lean man of sixty with a severe face that rarely broke into a smile.

He nodded curtly at Kieran and said, "That still looked a little clumsy. You need to keep practicing."

Kieran frowned and turned away, looking very displeased. Kieran had been training with Jason for a few months now, but his trainer never seemed satisfied with his work. Kieran thought he was good; in fact, he had won several medals in gymnastics at the state level.

"I've been practicing for months, Mr. Lang! My form is better, I feel confident, and I think I'm ready for the national try-outs," Kieran said to Jason, looking him in the eye.

Jason sighed and shook his head saying, "You're not ready, young man. Just keep practicing, and you'll be ready soon."

As Kieran walked home after training that day, he was still fuming. "Mr. Lang may have been a great gymnast in his time, but not anymore. I know I'm ready, and I'm not going to let him stop me from going to the national try-outs tomorrow," he thought to himself.

The next day, Kieran went to the stadium where the try-outs were being held. As he watched the gymnasts who performed before him, he was filled with a sense of dread and apprehension because they were well beyond his level. His lack of experience showed through in his performance, and he fumbled through his routine. Disappointed, he went to meet Jason and told him what had happened.

Jason put his hand on Kieran's shoulder and gave one of his rare smiles. "You were brave to try, Kieran, but you have to understand that I have your best interests at heart. I made the same mistake when I was young like you, and had to learn my lesson the hard way. I tripped and fell during a routine that I was not well-prepared for, fractured my leg as a result, and couldn't perform for months. That incident taught me that while it is good to aim high, never over-step your limitations."

Kieran nodded and resolved to keep practicing.

4. Which line from the passage helps to develop the themes?

- **A.** "That still looked a little clumsy. You need to keep practicing."
- **B.** "Mr. Lang may have been a great gymnast in his time, but not anymore."
- **C.** "You were brave to try, Kieran, but you have to understand that I have your best interests at heart."
- **D.** "That incident taught me that while it is good to aim high, never over-step your limitations."

5. Which is a universal theme from the passage?

- **A.** the quest for knowledge and truth
- **B.** the abuse of authority
- **C.** the ill effects of unchecked ambition
- **D.** the power of love

Passage 1

The Story of Athena

Once upon a time, Zeus, the ruler of Olympus, heard of a prophecy that the child that his wife Metis, the Titan goddess, will give birth to would overthrow his rule.

Later, Zeus had a terrible headache. His head burst open and out came Athena, the goddess of crafts and wisdom. Since Zeus and not Metis had given birth to her, Athena owed allegiance to him, and would not overthrow him. She swore to her father that she would never take a man for her husband and would serve him as a loyal daughter, ensuring his rule.

Though wise and patient, like all Olympians, Athena did not tolerate rivals. Once, she heard of the princess Arachne who claimed she could weave cloth better than Athena. So the goddess challenged her to a tapestry-weaving contest. The two sat at looms and began to weave their tapestries, each telling a story. Athena told the story of foolish mortals who challenged the gods, and Arachne told the story of vain gods who were cruel toward mortals. In the end, both tapestries came out equally good, and so an angry Athena grudgingly accepted defeat, but cursed Arachne that she would turn into a spider and spin webs for all eternity.

Passage 2

Hailey and Iris

Hailey was the daughter of the town's doctor, who was also said to be the smartest man in town and had a lot of money. This made Hailey very proud of herself, and she behaved as if she was better than the others at school. She always strived to come first in class and wanted to be the leader in all the extracurricular activities.

One day, Hailey heard a group of students discussing an upcoming science test in class and went up to talk to them.

"You guys shouldn't waste time in working so hard for the test, because you know that I will come first as usual," Hailey said as she looked mockingly at them.

Iris, one of the girls in the group, became furious at Hailey's overconfident remark and decided to challenge her.

"Why don't we wait till the test to find out who comes first?" Iris said as she looked at Hailey angrily.

Hailey was taken aback by Iris's comment but accepted her challenge with a smirk. On the day of the test, the teacher handed out papers and explained the rules. The entire time, Hailey rudely smirked at Iris, but this did not deter Iris from her goal of coming first.

The next day, when they received the test results, Hailey could not believe her eyes when she saw that Iris had scored one mark more than her.

"This is impossible!" Hailey shouted and took Iris to their teacher.

The teacher reexamined their papers and declared that Iris had in fact scored more than Hailey. Hailey felt humiliated when she realized that in spite of being the smartest girl at school, Iris had managed to score more than her.

"Unexpected things always happen, Hailey, and it is wrong to be overconfident just because you believe you are good at something," Iris told her with a smile.

Hailey's face turned red with embarrassment, and she quietly accepted defeat. But even this defeat did not make Hailey humble; in fact, she challenged Iris and the other students to compete with her more.

6. Which archetype do Arachne and Iris represent?

- **A.** The damsel, as they both are captured by their opponent and suffer a lot.
- **B.** The innocent, as they both are unaware of their opponents' strengths and capabilities.
- **C.** The heroine, as they both bravely stand against their opponents and come out victorious.
- **D.** The villain, as they both form an evil plan to bring down their opponents.

Passage 1

Back to the Future

Heath had come clean. The way of life he had led until now couldn't satisfy him. The day he decided to mend his mistakes was the day his mother said she still loved him. Heath knew, no doubt, that his family was waiting for him to turn around. Even in the darkest hours of the disappearance, Heath had not lost his faith in his family. Then, he had lost faith in himself and had walked out in anger. Heath had become lonely for the love that he had found smothering. After nights on the footpath, Heath knew what it took for his father to put a roof over his head. Suddenly, it all made sense. Heath was himself again. He felt newer and surer of himself like never before.

Passage 2

Not Drowning, but Waving

The day I almost drowned had saved my life.
I saw the world inside the waters' sphere.
Submerged I thought that I had lost it all,
and things had ended after one fateful fall.
But then, two hands reached for my shaky limbs.
I was pulled up; I made it to the shore.
I thank my life, more than I thanked before.

7. How are the archetypal settings in the poem and the story alike?

- **A.** They both take place in the desert where the hero goes on a spiritual quest.
- **B.** They both take place in the underground from which the hero emerges.
- **C.** They both take place in the city where the hero delves into the subconscious.
- **D.** They both take place in the wilderness where the hero faces disillusionment.

Passage 1

adapted from **The Fox and the Goat**

A fox one day fell into a deep well and could find no means of escape. A goat, overcome with thirst, came to the same well, and seeing the fox, inquired if the water was good. Concealing his sad plight the fox praised the water, saying it was excellent beyond measure, and encouraged the goat to descend to the well. The goat thoughtlessly jumped down, but just as he drank, the fox informed him of the difficulty they were both in and suggested a scheme for their common escape.

"If," said he, "you will place your forefeet upon the wall and bend your head, I will run up your back and escape, and will help you out afterward."

The goat readily agreed, and the fox leaped upon his back. Steadying himself with the goat's horns, he safely reached the mouth of the well and made off as fast as he could. He then turned around and cried out, "You foolish old fellow! If you had as many brains in your head as you have hairs in your beard, you would never have gone down before you had inspected the way up, nor have exposed yourself to dangers from which you had no means of escape."

Passage 2

Woes of Taking a Shortcut

Bianca was very popular in school and had many friends. Everyone had something good to say about her, but Bianca had one trait that always landed her in trouble: She was always in a hurry and did things on impulse. Her parents had often advised her to spare a minute to think before acting, but Bianca did not heed their advice.

It was a pleasant evening, and Susan had organized a small gathering at her place to introduce her cousin Alan to her friends. Bianca loved parties and was looking forward to having a good time at Susan's house. She spent a couple of hours dressing up in her finest dress, doing her hair, putting on makeup, and finally coating her nails a bright red color.

"Mom, I'm leaving!" called out Bianca, as she hurriedly took her purse and stepped out of the house.

She had hardly reached the next lane when she noticed the thick, dark clouds looming in the sky. She knew it would start raining soon. Her friend Mini had joined her as well, and the duo quickened their pace to avoid getting caught in the rain.

"I know a shorter route, and we'll save 10 minutes," panted Bianca.

"You know that means crossing the field with the barbed wire," muttered Mini, looking frowningly at Bianca.

"Don't you want to get there sooner?" coaxed Bianca.

Before Mini could respond, Bianca had already steered away from the street and taken the slushy sidewalk to the field.

"Oh no!" she cried as the muddy water splashed on her party dress.

She tried to wipe it with a tissue, and together the girls carefully moved toward the field. Bianca ducked as Mini held the wire to make space for Bianca to crawl through the horizontal wires. Her heart stopped when she realized that the hem of her dress had caught in the barbed wire, and as she tried to pull herself free, she could feel her dress tearing. Tears rolled down her cheeks as she realized the folly of her thoughtless decision.

8. How is the pattern of events in both passages **similar**?

- **A.** In both passages, the main events of the story take place within a crowded gathering.
- **B.** In both passages, the main events describe a good solution to a problem.
- **C.** In both passages, one character is shown to take decisions without pausing to think.
- **D.** In both passages, one character is shown as fun-loving and intelligent.

Passage 1

The Emerging of Kasia

Kasia could not believe she was actually boarding a flight to America. Only yesterday, she was sitting on the floor in the attic with dust all over her hands and the white cotton dress. The dress was her grandmother's last gift to Kasia. As Kasia moved her fingers around the old, greasy, and dusty globe, she thought of her grandmother who had put it there.

"Darling, one day you shall see the world," Kasia's grandmother, Justina, had said, "It is your fate." She had stood in the same attic with Kasia years ago. "Be sure to go to America, and write to me in English," Justina would say dreamily. Now, America was Kasia's dream. She thought about her university in New York.

"How will people understand me there?" Kasia spoke her fear out loud. From that moment, Lublin and everything Polish was always dearest to Kasia's heart.

Passage 2

What was Ahead?

Unable to ignore his mother's routine plea, Deepak decided to seek an astrologer. He had little trouble finding one because there was a fortune-teller of some sort in every nook of the city. He decided to visit a man with the most curious-sounding name.

"Son, do not seek after what your heart desires the most," the man said as Deepak entered the room that smelled of incense and saffron. "It is not your destiny," he continued without asking Deepak any questions."You have great athletic abilities. Why don't you play cricket?" the astrologer asked, "Don't you want to be famous?"

Deepak's eyes were focused on the view outside the window. He had forgotten all about the days when he used to play cricket. Deepak did not care about the astrologer's prophecies. He only wanted to become a scientist.

9. How does the idea of fate differ in each of the passages?

- ○ **A.** Kasia learns about her fate in a prophecy; Deepak's fate is shown to him by his mom.
- ○ **B.** Kasia's fate is leaving her home country forever; Deepak's fate is staying in his country.
- ○ **C.** Kasia follows what she thinks is her fate; Deepak does not want to follow his foretold fate.
- ○ **D.** Kasia does not believe in destiny and fate; Deepak believes in astrology and fortune-telling.

Passage 1

According to the ancient Greeks, Hades was the ruler of the underworld. He became ruler by defeating the Titans, the previous generation of Greek gods. Upon his victory, Hades descended into the underworld and took the job of ruling over the dead. Though Hades was feared by many, his primary role was to maintain balance and order in the underworld.

The Greeks believed that once a person died, he or she passed to the underworld through a crater named Avernus. From there, the person would be ferried across a river. The ferry driver, Charon, charged a fee. For this reason, the Greeks often buried their dead with coins in their mouths.

At the gates of Hades, three judges decided the fate of the dead person. If the person was good, he or she was allowed to ascend to the Elysian Fields, a place of paradise. If the person was evil, he or she was sentenced to Tartarus. In some cases, certain individuals were singled out for special treatment. Sisyphus, for example, was forced to roll a boulder up a hill repeatedly—only to watch it roll back down.

Passage 2

The Hindus of ancient India believed that upon dying, they would be judged by Yama, the lord of death. Yama was a terrifying ruler. He was thought to be the first mortal to have ever died. It was said that upon dying, Yama discovered a path to the heavens. Because he was the first to see this path, he became guardian over it.

Yama presided over the dead from his throne in a gloomy palace. From time to time, he would ascend to the mortal world, riding his buffalo. Because of his position as judge, Yama was thought to be cruel. At the same time, he was also considered a just ruler who was dedicated to maintaining balance and harmony.

According to the *Vedas*, ancient Hindu texts, after a person died he or she was taken to an underground palace by Yama's assistants. There, Yama listened as an assistant read from a book. The book contained a summary of the good and bad things the person had done during his or her life. After hearing this summary, Yama would decide the fate of this person. If the person was especially good, he or she would often be reincarnated, or born again, as a superior being. If, however, the person was evil, he or she was reincarnated as an inferior being.

10. Which of the following is a common purpose in both myths?

- ○ **A.** to warn people that they will be judged for good and bad deeds
- ○ **B.** to remind people they will have a second life after reincarnation
- ○ **C.** to prepare people for an expensive trip across an underground river
- ○ **D.** to educate people on how to live a long and healthy life on Earth

Answers: Compare Modern & Traditional Texts

1. C
2. C
3. A
4. D
5. C
6. C
7. B
8. C
9. C
10. A

Explanations

1. In Passage 1, the people of Israel are about to conquer the city of Jericho. The Lord speaks to Joshua and explains that Joshua's people will conquer Jericho after they shout. Then In Passage 2, Matthew's mother instructs him to shout before his job interview. Then he gets the job at Arnold's Chicken Palace.

2. In "The Bundle of Sticks," the farmer explains to his sons, through the example of the bundle of sticks, that they must all work together. In "The Sun King," Terrence explains to everyone that they should all work together to make the play a success. Therefore, the correct answer is "People must work together for a successful outcome."

3. In Passage 1, Joseph and Jacob listen to whatever the people say and do not think for themselves. In Passage 2, Michelle joins the Spanish class because her parents want her to learn Spanish. Therefore, the correct answer is "In both passages, the main characters want to please others."

4. In the passage, when Kieran fails at the national try-outs, Mr. Lang tells him about a similar incident from his past. He says "That incident taught me that while it is good to aim high, never over-step your limitations." This conveys the idea that it is advisable to learn from experience and avoid making rash decisions. Thus, it brings out the themes of the story.

5. In the passage, Kieran is too ambitious and wants to go to the national try-outs despite his trainer's advice to the contrary. As a result, he performs poorly and faces disappointment. This shows the ill effects of unchecked ambition.

6. The archetype of the heroine is one who bravely stands against the villain and performs heroic tasks. Arachne and Iris represent the archetype of the heroine, because they bravely stand up against their opponents, Athena and Hailey respectively, and come out victorious in the end.

7. An archetypal setting in literature is often a symbolic setting. The setting elements have some universal aspect that is associated by most people with a particular human experience. In the passage, Heath delves into the underground of his mind and emerges out of a darker way of living. In the poem, the speaker emerges safe from a drowning experience. The world under the water is the symbolic underground in the poem.

8. In Passage 1, the goat gets carried away by the fox's praise for the water in the well and decides to jump into the well without a thought. In Passage 2, Bianca decides to take a shorter route, which is unsafe, without thinking of the consequences. Therefore, the correct answer is "In both passages, one character is shown to take decisions without pausing to think."

9. Fate is something that unavoidably happens to a person. In the first passage, Justina tells Kasia what her fate is, and Kasia follows it. In the second passage, Deepak goes to an astrologer unwillingly and does not seem to want to follow the prophecy. The idea of fate differs in the actions and the inclinations of the characters.

10. In both of these myths, people are judged for their behavior. They are either punished or rewarded. While the punishments and rewards differ by culture, the myths have the same basic purpose. Each myth is meant to show people that after they die, they will be rewarded for good deeds and punished for bad deeds.

Grade 8 English Language Arts: Context Clues in Informational Texts

1. The cowbird is the bird that bird-lovers hate. The male, with its chocolate hood and glossy green-black plumage, is rather handsome, even if its "song" offends the human ear.

What is the meaning of the word plumage in the selection above?

- **A.** green-black leaves
- **B.** a nest
- **C.** noisy songs
- **D.** the covering of feathers on a bird

---

2. With his feature-length *Straight Out of Brooklyn*, Matty Rich stepped forward as the youngest of the new wave of African-American filmmakers. He proved wrong the local naysayers who didn't think a poor kid of seventeen could make a movie.

What is the meaning of the word naysayers in the selection above?

- **A.** someone with an aggressively positive attitude
- **B.** someone who helps you along the way
- **C.** someone who stops you from doing what you want
- **D.** someone with an aggressively negative attitude

---

3. The launch of the High Energy Solar Imager has been delayed indefinitely because of ongoing concerns about the satellite's launch vehicle—a Pegasus rocket. A NASA spokesperson said that the launch will still happen, but NASA is not sure when.

What is the meaning of the word indefinitely in the selection above?

- **A.** for the last time
- **B.** again
- **C.** for an uncertain amount of time
- **D.** forever

---

4. American scientist Benjamin Franklin invented the glass harmonica, also known as the Franklin harmonica, in the early 1760s. It is a mechanical version of the much simpler musical glasses that were popular at that time. These were a set of glass bowls of different sizes that were arranged from smallest to largest to produce distinct pitches. The bowls were fine-tuned by filling them partially with water. In the Franklin model, shallow glass basins are attached to a horizontal spindle that is revolved by a crank attached to a pedal. The spindle is placed in a trough of water so that the glasses are kept wet. The shimmering, bell-like sound is produced by touching the fingers to the wet edges. This instrument was popular in the late 18th and early 19th centuries.

What is the meaning of the word pitches as it is used in this passage?

- **A.** frequencies of sound waves reaching the ear (musical)
- **B.** the distance between adjacent threads on a screw
- **C.** baseball tosses
- **D.** short, lofted shots in golf

The scientific word for a pimple or a zit is acne. There are many myths that surround acne. The biggest one of all is that popping a pimple is the best way to **eliminate** it. In fact, this is wrong. Ask any **dermatologist**. They are doctors who focus on skin health. They will tell you that popping a pimple is the worst thing you can do to get rid of it. Popping a pimple actually allows more germs to get under the skin. This can actually make the pimple bigger. Also, popping a pimple could leave you with a scar. And that lasts longer than any pimple.

5. The biggest one of all is that popping a pimple is the best way to **eliminate** it.

What type of context clue is used to help you define the word eliminate?

- **A.** example
- **B.** antonym
- **C.** explanation
- **D.** synonym

---

6. Over the years, many musicians have tried to blend different styles of music to create a new, unique style. This method is called fusion. In other words, when different musically inclined people collaborate and create an exceptional style, it is called fusion music. For example, musicians created jazz fusion by combining jazz harmonies with rock and R&B music.

What does collaborate mean as used in the passage?

- **A.** to unite
- **B.** to consider
- **C.** to produce
- **D.** to decide

7. Ask any **dermatologist**.

What type of context clue is used to help you define the word dermatologist?

- **A.** synonym
- **B.** explanation
- **C.** antonym
- **D.** example

---

8. Calling the rules violations committed by the Alabama football program "some of the worst ever," the NCAA Committee on Infractions, or rule violations, recently lowered the boom on the football program. Among other restrictions, Alabama will not be allowed to play in a post-season bowl game for the next two years.
What type of context clue helps you to understand the phrase lowered the boom?

- **A.** analogy
- **B.** definition
- **C.** antonym
- **D.** cause and effect

---

9. When Punxsutawney Phil, the celebrated weather-predicting groundhog, comes out of his underground home this February 2 to predict whether there will be six more weeks of winter weather, onlookers will expect an additional prediction from him. They want him to predict the winner of this year's Super Bowl. The State College-based AccuWeather Inc. believes that science trumps superstition; however, the employees there are also making their predictions on the weather and the Super Bowl.
In this passage, the word trumps means

- **A.** disproves of.
- **B.** agrees with.
- **C.** relies on.
- **D.** ranks higher than.

---

10. Nature uses air, water and land again and again. This is called recycling. Energy in the form of sunlight provides the power for nature to recycle.
What does recycling mean in the passage above?

- **A.** naturally occurring
- **B.** using again
- **C.** energetic
- **D.** returning

Answers: Context Clues in Informational Texts

1. D
2. D
3. C
4. A
5. D
6. A
7. B
8. D
9. D
10. B

Explanations

1. We know that the word "plumage" must have something to do with the bird's looks, as the writer says that the "glossy green-black plumage is rather handsome." The word "handsome" is used to describe appearances. "The covering of feathers on a bird" is the only answer choice that addresses the physical appearance of the bird.

2. The description following the word "naysayers" can provide a clue as to what "naysayers" are. If a group of people thinks that an underprivileged kid of seventeen CANNOT make a movie, they are probably very negative people. They probably aren't positive and aren't going to be helpful. There are no clues, however, that suggest that these people, although negative, would try to *stop* an underprivileged kid of seventeen from making a movie.

3. If something is **indefinite** it is *not definite*.

4. The context provides cause and effect information. Playing the glass harmonica, a musical instrument, produces musical sounds.

5. Later in the passage it mentions that popping a zit is actually the worst way to get rid of it. That is a different way of saying eliminate. By saying the same thing in a different way, the passage uses synonyms to teach new words.

6. The passage uses words like "blend" and "combine" to suggest that different musicians come together to create a new style of music. Therefore, the readers can infer that collaborate means "to unite."

7. In the sentence following the use of the word dermatologist, it describes that it is a doctor who focuses on skin health. This explains what kind of doctor a dermatologist is.

8. "Lowered the boom" means to "bring a heavy punishment down upon someone or something." The NCAA "lowered the boom" as a result of Alabama's committing serious rules violations.

9. The context shows the relationship between the groundhog prediction, which is superstition, and the AccuWeather prediction, which is based on science. You can guess that the State College-based AccuWeather Inc. believes that science ranks higher than superstition.

10. You know that one meaning for the word cycle is "to repeat." The prefix "re-" means to do something again.

Grade 8 English Language Arts: Point of View and Purpose in Informational Texts

Jesse Owens

Jesse Owens was an Olympic legend, born in Alabama on September 12, 1913. When he was born, his parents named him James Cleveland, or "J.C." When he was nine years old, he moved to Cleveland with his family. One day, in school, his teacher mistakenly wrote down his name as "Jesse" instead of "J.C.", and he was known as Jesse Owens since then.

Owens showed great promise as an athlete right from the time he was in school. He won many races and medals, setting new records in the process. For instance, in his senior year, Owens set a new world record in the 220 yard dash, completing the dash in just 20.2 seconds. It almost seemed like he was wearing Hermes's winged sandals! Impressed by his track record, many colleges wanted to recruit him after he completed high school. Owens ultimately chose to attend Ohio State University. To pay his way through college, and to support himself and his wife, Owens took up a number of jobs. Some of these included working as an elevator operator, a page, and a waiter.

Owens's biggest claim to fame was his participation in the 1936 Olympics in Germany. He became the first American to win four gold medals at the Olympics. Owens's outstanding record remained unbeaten until 1984, when it was finally matched by Carl Lewis at the Olympic Games in Los Angeles. Even after his stint at the Olympics, Owens continued to work a number of jobs to support his family. One such job was working with the underprivileged youth of his community. He traveled far and wide as a motivational speaker, sharing his wisdom and inspiring people.

Jesse Owens's achievements are remembered even today. Like the tale of David and Goliath, Owens's story also serves as an inspiration to many, proving that anyone can dream big and turn his or her dreams into reality.

1. What is the author's purpose in writing this passage?

- ○ **A.** to teach the reader about Jesse Owens's school experience
- ○ **B.** to inform people about Jesse Owens's accomplishments
- ○ **C.** to entertain the reader with stories about records Jesse Owens set
- ○ **D.** to persuade the reader that Jesse Owens was a great athlete

2.

DO YOU WANT LOWER TAXES?
DO YOU WANT A BETTER EDUCATION FOR YOUR KIDS?
ARE YOU READY FOR A CHANGE?
IF YOU ANSWERED "YES,"

VOTE FOR GEORGE V. JONES

The purpose of the political advertisement above is to

- **A.** persuade readers to vote for George V. Jones.
- **B.** entertain with a story of George V. Jones.
- **C.** describe the past work of George V. Jones.
- **D.** inform the readers about George V. Jones.

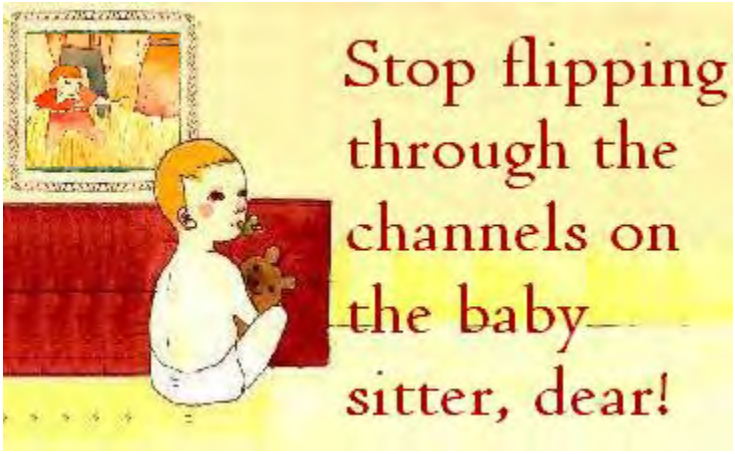
View from Inside

As I drove through the Sonoran Desert, I was struck by how beautiful everything was. I was speeding down the highway, looking west across the desert, as the sun snuck up behind me. There was just enough light to give a reddish-orange glow to the valley walls. The saguaro cacti cast shadows across the brush dotting the desert floor, and I watched as the saguaros lifted their arms to the sky. All of a sudden, heavy rain began to fall, and when it ended 20 minutes later, the saguaros were left to greedily drink up what little water they could get. The sun rose higher in the sky, and waves of heat began rising off the desert floor. Those waves reminded me that the beauty I saw was the result of an unbelievably harsh climate. It's easy to forget how cruel nature can be when you're inside a climate-controlled vehicle.

3. What is the author's purpose in writing this passage?

- **A.** to describe to the reader a scenic drive
- **B.** to inform the reader about saguaro cacti
- **C.** to tell the reader how to live in a desert
- **D.** to persuade the reader to visit a desert

4.



What is the purpose of this political cartoon?

- **A.** to persuade the audience that parents rely too much on television to babysit
- **B.** to instruct the audience how to babysit their children using technology
- **C.** to encourage the audience to allow television to babysit their children
- **D.** to convince the audience that television is important in the life of a child

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5. This is the official call for entries for the 13th annual Chili Competition, which takes place Saturday, February 8, at the Williston Mall. Each year, about 25 teams get together to cook up their best chili to compete for prizes. The proceeds from this year's event will benefit several local charities. Chili teams will cook from 9 a.m. to 1 p.m. Judging takes place at 1 p.m. Chili samples will be available for $.25 beginning at 12:00 p.m. while they last.

The author's purpose for writing the paragraph above is to

- **A.** narrate a series of events about the chili competition.
- **B.** entertain the reader with a story of a chili competition.
- **C.** persuade people to compete in the chili competition.
- **D.** provide information about the chili competition.

Vending Machines: Food for Thought

Snack vending machines or food dispensing machines are indeed very convenient because they help people to quickly grab a bite "on the go." A hungry worker running late for a meeting can insert some money and get a packet of chips or an energy bar. Though these machines help people save time by avoiding long lines and not making them wait at restaurants, many of these snack vending machines provide food items that are thin in nutrition value. Such machines are not limited to offices or shopping malls and can also be found in many schools in the United States. A number of children prefer eating junk food from these machines over home-packed or even cafeteria food. Lately, many parents have started questioning the use of these vending machines at schools.

While parents, and even many nutrition experts, argue that young children get addicted to unhealthy foods from a vending machine, they seem to have overlooked the benefits of a vending machine. The problem of junk food can be easily solved by switching to snack vending machines that serve healthy snacks. Such machines would put an end to the worries of parents who are unable to pack lunch for their children. A quick bite of a candy bar may seem filling, but it does not fill the body with necessary vitamins or minerals. Instead of installing vending machines that offer sodas, schools can switch to machines that offer fresh fruit juices. Candy bars and chips can be replaced with fresh vegetable salads or sandwiches.

Vending machines can actually help people instead of harming them. If a student feels hungry in between two classes, he/she can quickly get some food from the machine instead of waiting until the lunch break. If schools stick to traditional vending machines, students may develop a strong dependency on convenience food. Rather than complaining about unhealthy snack vending machines, parents should encourage schools to start using healthy snack vending machines to avoid problems.

However, the traditional vending machine does not find its place in a school. Changing to healthy snack vending machines will also add to the school's expenditure. Money raised from these machines can go into useful school projects.

6. What is the author's perspective on vending machines?

- ○ **A.** Vending machines are best for employed adults who wish to save time.
- ○ **B.** Vending machines in schools should be replaced by a good cafeteria.
- ○ **C.** Healthy snack vending machines do not supplement nutritious food.
- ○ **D.** Healthy snack vending machines can help school-going children.

7. Advocates for school uniforms claim that their use will reduce crime and violence in the schools. It will bring discipline and learning back in. If we need to require uniforms to prevent students from killing one another over designer jackets, then we should do just that. Before we adopt such policies, however, we should consider other strategies that might work. There may be other ways to eliminate crime and violence in the schools.

What was the author's purpose in writing the paragraph about school uniforms?

- **A.** to entertain with a story about using school uniforms
- **B.** to convince the reader to consider other strategies
- **C.** to describe the new policies of uniforms in school
- **D.** to warn the reader against using uniforms in school

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8. Mom,

This note is to remind you that I have soccer practice this afternoon. Jeff's mom is taking us and picking us up. See you at dinner.

Andrew

What was Andrew's purpose in writing this note to his mother?

- **A.** He wanted to entertain her with a funny story about his day.
- **B.** He wanted to persuade her to take him to soccer practice.
- **C.** He wanted to express his opinion about his soccer practice.
- **D.** He wanted to inform her about his plans for the afternoon.

The Menace of Littering

People enjoy the natural beauty of places like beaches, lakes, and mountains. In the last couple of decades, these spots have witnessed a considerable increase in the number of tourists. Although tourists help boost the economy of a place, they are often responsible for causing an increase in litter by disposing of tissues, drink cans, water bottels, and plastic bags on the ground. Despite regular cleanup, these places gradually get polluted and lose their charm.

Tourists need to show civic responsibility. They should only carry the essentials and should dispose of waste in trash bins. Governments and other institutions are making an effort to keep tourist spots clean, but only conscious tourists can ensure these places are litter-free.

9. Why did the author **most likely** write this article?

- **A.** to persuade readers to not litter at tourist spots
- **B.** to inform readers to not visit certain tourist spots
- **C.** to describe to readers the connection between economics and littering
- **D.** to entertain readers with fun facts about places of natural beauty

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School Sports Matter

Re: "Put academics first," by Bob Kirby, Wednesday Letters.

Hey, Bob, I disagree with your opinion about high school sports and extracurricular activities. I think you're missing the bigger picture.

What about enjoyment, involvement, and becoming a well-rounded person? What about life?

High school is about a lot more than just academics. Not everybody achieves in the classroom—but many do well enough in class and then excel on the playing field. Student athletes have a better chance of gaining a scholarship to a college than "just" a good student.

I am a football player at Bishop Lynch and have a 4.0 grade point average. However, I would prefer to be playing on the field than sitting in any class.

My favorite high school memories will be of my friends on the football team, not my classmates in school.

adapted from an editorial response by Jacob Rochester

10. What is the author's purpose in writing this letter?

- **A.** to entertain with stories about football
- **B.** to inform readers about football clubs
- **C.** to persuade readers about school sports
- **D.** to describe the school's football team

Answers: Point of View & Purpose in Informational Texts

1. B
2. A
3. A
4. A
5. D
6. D
7. B
8. D
9. A
10. C

Explanations

1. The author is writing "to inform people about Jesse Owens's accomplishments." The writer not only focues on Jesse Owens as an athlete but as a person who demonstrated great persistence to accomplish goals.

2. The advertisement lists things that George V. Jones promises will happen *in the future* if he is elected. There is no factual information about Mr. Jones or about the work that he has done in the past. The only possible answer is that the ad is designed to persuade readers to vote for George V. Jones.

3. In this passage, the author is describing his or her own experience of a series of natural phenomena. He or she describes the scenery he or she sees during a scenic drive in the desert. The vivid images that the author paints tell the reader that the author's purpose is to describe.

4. The purpose of political cartoons is to humor, entertain, and politically persuade. In this case, the author is making a point to persuade the reader that parents rely too much on television for monitoring or babysitting their children.

5. In the paragraph, the writer tells what, where, when, and why about the topic—a chili competition. The author gives all the information the reader needs in order to decide whether to participate. The paragraph is not written to entertain or persuade the reader. The paragraph is informative and is not narrative.

6. The author is of the opinion that vending machines can be used in schools only as long as these machines dispense healthy snacks. Hence, the correct answer is "Healthy snack vending machines help school-going children."

7. First, the author states the position of advocates for school uniforms: They think requiring uniforms will reduce crime and violence. Then, the author expresses the opinion that we might need to consider other strategies before adopting school uniforms. The author is not trying to entertain the reader.

8. Andrew's purpose was simply to make sure his mother remembered his plans for the afternoon. He wrote the note to inform her of those plans in case she had forgotten them.

9. The author's purpose of writing this passage is to persuade the readers to exhibit civic responsibility and to ensure that the places they visit remain litter-free by adopting certain methods. Therefore, the correct answer is, "to persuade the readers to not litter at tourist spots."

10. The author of this letter is writing in response to an editorial. He disagrees with the author of the original article and hopes to convince him that school sports do matter.

Grade 8 English Language Arts: Research Questions and Topics

1. Joseph is writing a research paper about the positive effects of Internet usage for children. Joseph's thesis is that children who have access to educational tools and resources on the Internet perform better in school. He has decided to survey 50 students and use the results to support his thesis.

Which question should Joseph include on his survey?

- **A.** How many times a week do you play educational games on the Internet?
- **B.** Do you have a quiet place set aside where you can do your homework?
- **C.** Do you complete your homework right after school or later in the evening?
- **D.** How much time do you spend socializing with your friends on the Internet?

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2. Carly is writing a research paper about the effects of social media on teenager's social skills. Her thesis is that teens who spend more time on social media websites or mobile applications spend less time actually socializing with other people. She has decided to survey 40 teenagers and use the results to support her thesis.

Which question should Carly include on her survey?

- **A.** How many of your assignments have you completed using social media websites or applications?
- **B.** Which social media website is best for sharing and listening to music?
- **C.** Which model of cellphone works best with certain social media websites?
- **D.** How many times a day do you open social media websites or applications on your phone?

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3. Which research question would lead to the **most** information about how eating healthy food helps students learn better?

- **A.** Do students who eat healthy food focus better in class?
- **B.** How can school districts make healthy food more common?
- **C.** Why do healthy food items taste different than other food items?
- **D.** Should students decide which foods are healthy for them?

4. Roberto wants to know how seaweed adapt to survive in marine conditions.

Which research question would **best** help Roberto find information about his topic?

- **A.** How do root systems help secure seaweed to the seabed?
- **B.** Does seaweed only grow in rivers and other freshwater sources?
- **C.** Which marine animals depend on seaweed for food?
- **D.** How has seaweed become a delicacy in certain cultures?

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5. Kelly is writing a research paper on the positive effects of having a family pet. Her thesis is that looking after a pet teaches young children responsibility. She has decided to survey 25 parents and use the results to support her thesis.

Which question should Kelly include on her survey?

- **A.** Do you think having a pet distracts your children from homework?
- **B.** How regularly do you take your pet on family outings?
- **C.** How many members of your family enjoy spending time outdoors with your pet?
- **D.** Do your children perform tasks such as feeding, walking, or bathing your pet?

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6. Which research question would lead to the most information about how schools could implement an after-school fitness program?

- **A.** What kinds of food should school cafeterias serve to promote health?
- **B.** What effects have after-school fitness programs had on school morale?
- **C.** Which strategies have other schools used to create fitness programs?
- **D.** Which schools in the United States have the healthiest students?

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7. Alison is writing a paper on the positive effects of using computers and online resources to teach students in schools. Her thesis is that electronic and online tools make classroom learning engaging for students. Alison has decided to survey 20 teachers and use the results to support her thesis.

Which question should Alison include on her survey?

- **A.** How many students use online resources for talking to friends?
- **B.** How many students have access to the internet at home?
- **C.** Do students who learn through online resources earn better grades on assessments?
- **D.** Which kinds of online resources do teachers commonly use in schools?

8. Juanita is writing a research paper about the positive effects of students gardening at school.

Which research question would **best** help Juanita find information about her topic?

- **A.** How does gardening impact students' mood and behavior?
- **B.** Do students prefer doing gardening in summer or winter?
- **C.** Should schools consider reading about gardening in class?
- **D.** Which plants are preferred by students for gardening?

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9. Sophia wants to know how recycling can reduce the amount of waste in landfills.

Which research question would help Sophia find the **most** relevant information about this topic?

- **A.** How can governments create laws that make recycling a requirement for people?
- **B.** Why does recyclable waste end up in landfills?
- **C.** What percentage of waste in landfills is made up of non-recyclable materials?
- **D.** Which is the largest landfill in the world?

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10. Which research question would lead to the **most** information about how polar bears have bodies that are adapted to survive in cold arctic regions?

- **A.** How much does a polar bear weigh?
- **B.** What animals do polar bears prey on?
- **C.** How does a polar bear's layers of fat and fur keep it warm?
- **D.** Do polar bears hibernate during winters like other bears?

Answers: Research Questions & Topics

1. A
2. D
3. A
4. A
5. D
6. C
7. C
8. A
9. C
10. C

Explanations

1. Joseph is trying to gather information to support his thesis, which is that children who have daily access to educational tools and resources on the Internet perform better in school. He needs to know how many times a week each survey participant plays educational games.

2. Carly is gathering information to support her thesis, which is that teenagers who spend time on social media spend less time socializing with others. She needs to know how many times a day the survey participants open social media websites or applications. Therefore, the best question to ask is, “How many times a day do you open social media websites or applications on your phone?” to get the relevant information she needs.

3. The researcher wants to know how eating healthy food helps students learn better. Therefore, the question, “Do students who eat healthy food focus better in class?” helps the researcher find information that is most relevant to the topic.

4. Roberto wants to know how seaweed has adapted to survive in undersea, marine conditions. The question "How do root systems help secure seaweed to the seabed?" would help Roberto learn of one way that seaweed has adapted to marine life, which is relevant to his topic.

5. Kelly is gathering information to support her thesis about how taking care of a pet teaches children responsibility. She needs to know if the children in families that participated in the survey perform tasks that require caring for the pet. Therefore, she should include the question, "Do your children perform tasks such as feeding, walking, or bathing your pet?" in her survey.

6. One of the best ways to learn how to implement an after-school fitness program is to research schools that have successful programs. The correct answer choice allows the researcher to review the strategies these schools used to create successful after-school fitness programs, which would provide the most relevant information.

7. Alison is gathering information to support her thesis, which states that electronic and online tools make classroom learning engaging for students. She needs to ask her survey participants if students they taught using online resources scored better in assessments. Therefore, the question, “Do students who

learn through online resources earn better grades on assessments?” helps the researcher find information that is most relevant to the topic.

8. Juanita is writing a paper about the positive effects that gardening has on students. Finding information about how gardening makes students feel would be helpful to her research. The question, "How does gardening impact students' mood and behavior?" would lead to the most information about Juanita’s topic.

9. Sophia wants to know how recycling can reduce the amount of waste in landfills. The question, "What percentage of waste in landfills is made up of non-recyclable materials?" would lead to the most relevant information about Sophia's topic.

10. The question, "How does a polar bear's layers of fat and fur keep it warm?" helps the researcher learn about the unique body characteristics that allow polar bears to survive in arctic regions.

Grade 8 English Language Arts: Verbs and Voice

Hoarding has been seen as a serious problem in America, and researchers have studied it in detail. Hoarders are people who are unable to throw away material things because of an attachment. While some people gather empty yogurt containers, used Band-Aids have also been collected. Hoarders collect so much stuff that it is impossible to walk through their house without using narrow paths, also called "goat trails." While it may seem odd for people who do not collect excessive things that others call junk, hoarders are depressed by the loss of their collections.

Hoarders have feelings for things they own. For example, a hoarder might feel saddened by the loss of a yogurt container going into the trashcan because he or she believes it would be "suffocated." Everyone feels attached to material things, but hoarders are adversely affected by it. They would rather continue living in difficult, unsanitary conditions than deal with getting rid of stuff. In addition, it takes them a long time to decide about throwing away something. In between the periods of decision-making, they collect more stuff that they have to think about. Often, family members interfere with the hoarders, and their time is wasted in attempts to convince the hoarder to get rid of more junk.

1. Which of these sentences from this passage shows a shift in the voice?

- ○ **A.** In between the periods of decision-making, they collect more stuff that they have to think about.
- ○ **B.** In addition, it takes them a long time to decide about throwing away something.
- ○ **C.** Hoarding has been seen as a serious problem in America and researchers have studied it in detail.
- ○ **D.** Hoarders are people who are unable to throw away material things because of an attachment.

---

2. What is the best way to change the sentence below from active voice to passive voice?

The French Pepe speaks is beautiful.

- ○ **A.** Pepe's French is spoken beautifully.
- ○ **B.** Beautiful French is what Pepe speaks.
- ○ **C.** Pepe speaks beautiful French.
- ○ **D.** French is what Pepe speaks beautifully.

---

3. Which statement is written in passive voice?

- ○ **A.** The houses were built by the hardworking people of Habitat for Humanity.
- ○ **B.** Emily left Argyle back in 1995 and moved to Austin.
- ○ **C.** Josh practices every day after work by the playground near his house.
- ○ **D.** The wheat stalks stand high above the fence around Oak Ranch.

4. What is the best way to change the sentence below from active voice to passive voice?

People water their gardens more than once a week during the summer.

- **A.** Come summer, you water gardens more than once a week.
- **B.** Gardens are watered more than once a week during the summer.
- **C.** Somebody will water gardens more than once a week during the summer.
- **D.** During the summer, the rainfall may water the gardens more than once a week.

---

5. Which sentence **best** uses the active voice to emphasize the actions of the subject?

- **A.** Finn's science project was appreciated by his teacher.
- **B.** Ross ate his sandwich after completing his work.
- **C.** Jared's performance was recorded by the local news station.
- **D.** The stage curtains were drawn before the play.

---

6. Which of the following sentences is written in active voice?

- **A.** By Eric, what life would be like if he had an unlimited bank account was imagined.
- **B.** What life would be like if he had an unlimited bank account was imagined by Eric.
- **C.** Eric imagined what life would be like if he had an unlimited bank account.
- **D.** If he had an unlimited bank account, what life would be like was imagined by Eric.

---

7. What is the best way to change the sentence below from active voice to passive voice?

Students will need to make costumes for the school play.

- **A.** For the school play, someone will need to make costumes.
- **B.** Costumes will need to be made for the school play.
- **C.** Parents will need to make costumes for the school play.
- **D.** For the school play, you will need to make costumes.

Nakamura could not believe his eyes. After waking up from a sudden noise, he had come to the living room to investigate the situation. There was actually a stranger in his home. Nakamura was not seen by the stranger, and he slowly snuck into the bathroom. There, he called the police, speaking as softly as he could. "Stay where you are and someone will be sent as soon as possible," the police officer had assured him.

Nakamura waited in the dark bathroom and stayed silent throughout the noises he heard from the living room. As if the moments could not last longer, he heard the footsteps getting closer. Nakamura's heart was beating louder than the drums of a marching band. He could not remember if the bathroom door had been locked by him from the inside. Nakamura was praying for protection when the front door was flung open by force. Nakamura waited before getting out of the bathroom. He had heard the police officers yell "freeze," "you are under arrest," and "remain silent." He breathed, shivered, prayed again, and slowly emerged from the bathroom. The police had been looking for the thief for months, and he was finally caught in the act.

8. Which of these sentences from this passage shows a shift in the voice?

- **A.** He breathed, shivered, prayed again, and slowly emerged from the bathroom.
- **B.** Nakamura was not seen by the stranger, and he slowly snuck into the bathroom.
- **C.** As if the moments could not last longer, he heard the footsteps getting closer.
- **D.** Nakamura waited in the dark bathroom and stayed silent throughout the noises. . .

---

9. What is the best way to change this sentence from passive voice to active voice?

> The team was cheered on by the animated fans that pranced in the pouring rain.

- **A.** By the animated fans that pranced in the pouring rain, the team was cheered on.
- **B.** On was cheered the team by the animated fans that pranced in the pouring rain.
- **C.** The animated fans that pranced in the pouring rain cheered the team on.
- **D.** Cheered on was the team by the animated fans that pranced in the pouring rain.

---

10. Which sentence is written in active voice?

- **A.** The teachers allow extra credit opportunities to all their students.
- **B.** The progress reports are to be signed by the students' parents.
- **C.** The students had been held longer by the monitor in study hall.
- **D.** Some students are given trouble by the reading passages that are longest.

Answers: Verbs & Voice

1. C
2. A
3. A
4. B
5. B
6. C
7. B
8. B
9. C
10. A

Explanations

1. Shifts in voice can make a sentence or passage confusing. To correct the shift, both clauses in the sentence should be in the same (active) voice. Here is one way this sentence could be rewritten in active voice: Researchers see hoarding as a serious problem in America, and they have studied hoarding in detail.

2. Sentences written in passive voice are useful when the actor is unknown or not as important as the action. In this case, the action is what is important. The passive sentence does not contain an actor, or a subject, that performs the action of the verb "speak."

3. In sentences written in passive voice, the subject receives the action expressed in the verb; the subject is acted upon. In this case, the actor, or subject of the verb, is "people." "People" is at the receiving end of the action.

4. Sentences written in passive voice are useful when the actor is unknown or not as important as the action. In this case, the action is what is important. The passive sentence does not contain an actor, or a subject, that performs the action of the verb "water."

5. In sentences written in active voice, the subject performs the action expressed in the verb. In this case, Ross, the subject, performs the action of eating. Therefore, the correct answer is "Ross ate his sandwich after completing his work."

6. In sentences written in active voice, the subject performs the action expressed in the verb; the subject acts. In this case, the subject, "Eric," performs the action, "imagined."

7. Sentences written in passive voice are useful when the actor is unknown or not as important as the action. In this case, the action is what is important. The passive sentence does not contain an actor, or a subject, that performs the action of the verb "make."

8. Inconsistency or a shift in a sentence confuses the reader. Shifts in the voice can make reading difficult and the meaning confusing. To correct the shift, both clauses in the sentence should be in the same

(active) voice. In the correct answer choice, the first clause is in passive while the second is in active. The corrected sentence reads: The stranger did not see Nakamura, and he slowly snuck into the bathroom.

9. In sentences written in active voice, the subject performs the action expressed in the verb; the subject acts. In this case, the subject, "fans," performs the action, "cheered," the past tense of "cheer."

10. In sentences written in active voice, the subject performs the action expressed in the verb; the subject acts. In this case, the subject, "teachers," performs the action, "allow."

Grade 8 English Language Arts: Affixes and Roots

1. Identify the meaning of the root word underlined in the word **dictionary**.

- **A.** to step
- **B.** to mix
- **C.** to speak
- **D.** to ask

---

2. "General Wood does not think that I give quite enough credit to the Rough Riders as compared to the regulars in this Guasimas fight, and believes that I greatly underestimate the Spanish force and loss." -- Theodore Roosevelt

Identify the meaning of the prefix underlined within the following word: **underestimate**.

- **A.** above
- **B.** around
- **C.** below
- **D.** in

---

3. When the snow froze over into ice, it caused quite the catastrophe for the parking lot. The ice was so heavy, it caused the branches to break from the trees and onto the parked cars. In addition to the broken windshields, the floor to the lot was covered in debris and other particles. This was abnormal weather for this time of the year.

Using your knowledge of Greek and Latin roots, what is the meaning of the word **catastrophe** in the passage above?

- **A.** Insurance
- **B.** A turn for the worst
- **C.** Heaviness
- **D.** Glass

---

4. A form of government that is **bicameral** has _____ divisions.

- **A.** one
- **B.** many
- **C.** no
- **D.** two

5. A doctor must write a note for the pharmacist **before** you can purchase certain types of medicine. What is this note called?

- **A.** prescription
- **B.** postscription
- **C.** unscription
- **D.** antiscription

---

6. "In framing a government which is to be administered by men over men . . . you must first enable the government to control the governed; and in the next place oblige it to control itself." -- James Madison

Identify the meaning of the prefix underlined within the following word: **ob**lige.

- **A.** through
- **B.** toward
- **C.** many
- **D.** in

---

7. Devon is the oldest, and he knows what it's like to be the big brother. As the patriarch of his family, Devon's father would go out of town to work and provide for his family, so Devon decided to help out more around the house.

Using your knowledge of Greek and Latin roots, what is the meaning of the word **patriarch** in the passage above?

- **A.** Mother of the family
- **B.** A family member
- **C.** An acquaintance
- **D.** Father of the family

8. "The whole of this great arsenal of war factories in the Ruhr depends for its water on three enormous dams: the Moehne, the Eder, and the Sorpe. They control the level of the canals and supply a lot of hydroelectric power as well. When those are full, they hold four hundred million tons of water. Just think of the chaos if we could break those walls down." -- Dr. Barnes N. Wallis, CBE, FRS

Identify the meaning of the prefix underlined within the following word: **hydroelectric**.

- **A.** air
- **B.** smoke
- **C.** water
- **D.** land

---

9. The prefix **auto-** means

- **A.** self.
- **B.** move.
- **C.** other.
- **D.** without.

---

10. The word **manuscript** contains the root word **script** with the prefix **manu-**. What is the definition of **manuscript**?

- **A.** a document written about another person
- **B.** a rock carving
- **C.** a document written by hand
- **D.** a homemade piece of furniture

Answers: Affixes & Roots

1. C
2. C
3. B
4. D
5. A
6. B
7. D
8. C
9. A
10. C

Explanations

1. The root **dict** is also found in **contradiction** and **dictate**.

2. "Under" means "below." In this case, a "below estimate" is one where the estimate is less than the actual size, quantity, or number.

3. The word "cata-" is a prefix meaning "down." The suffix "-strophe" means "turning." By putting them together you get "down turning." Think about how all of the branches fell to the parking lot. They took a turn downward.

4. The prefix **bi-** means "two." A bicameral government has two houses. For example, the U.S. government has a congress and a senate.

5. The prefix **pre-** means "before."

6. The prefix "ob-" means "toward." The word part "lige" means "to bind." If you observe something, you're looking towards it. If you oblige something, you're binding it towards oath.

7. The root word "pater" means father. Even if you don't know what the rest of the word means, the knowledge of the root word "pater" is enough to tell you that it refers to Devon's dad.

8. The prefix "hydro-" means "water." So in this case, there is electricity through water if something is "hydroelectric."

9. The prefix **auto-** means "self." An automatic dishwasher runs by itself.

10. The prefix **manu-** means "hand." The root **script** means "writing."

Grade 8 English Language Arts: Word Relationships

MTV, or Music Television, is a cable television network based in New York City. The network launched on August 1, 1981. Its original purpose was to show music videos. Today, the network broadcasts a variety of music, pop culture, and television shows aimed at adolescents and young adults. The network is now made up of four different channels just in the U.S. MTV has revolutionized the music industry since its premiere. MTV brought the concept of a disc jockey to the channel with video jockeys. Both artists and fans found a central location of music events, news, and promotion.

1. Read the following sentence from the passage.

"Both artists and fans found a central location of music events, news, and promotion."

Which of these words is a synonym of promotion?

- **A.** concerts
- **B.** press
- **C.** images
- **D.** sales

Día del Amigo is a Spanish celebration of friendship. It translates to "Friend's Day." The holiday is celebrated each year on July 20 in Argentina and Uruguay. A few other countries also celebrate the holiday.

The idea for Friend's Day comes from Argentine instructor, musician, and dentist Enrique Febbraro. He **lobbied** for the holiday to be on July 20. He wanted to turn the first anniversary of the moon landing into an international day of **camaraderie**. He believed that the world had **befriended** the astronauts that day. The first official recognition came with a decree in the **province** of Buenos Aires, Argentina. The government **authorized** the celebration of the holiday.

2. Which word is a **synonym** for "lobbied" in the passage above?

- **A.** pushed
- **B.** ignored
- **C.** foundation
- **D.** removed

3. Land is to **sea** as **dry** is to

- **A.** paper.
- **B.** wet.
- **C.** sand.
- **D.** eyes.

MTV, or Music Television, is a cable television network based in New York City. The network launched on August 1, 1981. Its original purpose was to show music videos. Today, the network broadcasts a variety of music, pop culture, and television shows aimed at adolescents and young adults. The network is now made up of four different channels just in the U.S. MTV has revolutionized the music industry since its premiere. MTV brought the concept of a disc jockey to the channel with video jockeys. Both artists and fans found a central location of music events, news, and promotion.

4. Read the following sentence from the passage.

"MTV brought the concept of a radio disc jockey to the channel with video jockeys."

Which of these words is a synonym of jockey?

- **A.** competitor
- **B.** contestant
- **C.** sportsperson
- **D.** announcer

---

5. Stanza is to **poem** as **verse** is to

- **A.** song.
- **B.** music.
- **C.** singing.
- **D.** rhyme.

---

6. Mumble is to **talk** as **scribble** is to

- **A.** paper.
- **B.** pen.
- **C.** signature.
- **D.** write.

The Reuben Sandwich

The Reuben sandwich is layered with pastrami, sauerkraut, and Swiss cheese. Thousand Island dressing is spread on the bread before grilling. Some claim the sandwich originated after a Lithuanian grocer from Nebraska. Another account of the acclaimed sandwich is that the owner of Reuben's Delicatessen of New York named it. Since then, several variations of the sandwich have been created. The Rachel substitutes corned beef for pastrami and coleslaw for sauerkraut. The Blue Reuben replaces the traditional dressing with bleu cheese. Reuben pizza substitutes sweet potato dough for bread. Mozzarella cheese is used, and then it is topped with pickles before serving.

7. Read the following sentence from the passage.

Reuben pizza substitutes sweet potato dough for bread.

Which of these words is a synonym of substitutes?

- **A.** retains
- **B.** designates
- **C.** supplies
- **D.** replaces

The Orient Express

The Orient Express was an international railway. It originated in the late 1800s. The multiple lines started in Paris and ran to Istanbul. People traveling on the train had to be somewhat prosperous as the tickets were not inexpensive. It was a luxury to ride the train. The very first prepared meal consisted of oysters, soup with Italian pasta, and fillet of beef with French-style potatoes. Dessert was either chocolate pudding, or a dessert buffet. Travelers liked that the trip was exclusive. They socialized with one another until they reached their destination. Sleeping cars were available for those passengers who wanted to rest. In 2009 the train stopped running due to the airlines undercutting their business.

8. Read the following sentence from the passage.

They socialized with one another until they reached their destination.

Which of these words is an antonym of socialized?

- **A.** debated
- **B.** gathered
- **C.** fraternized
- **D.** interacted

The Surprise

It was the weekend, and sisters Sara and Simone were tired after their dance practice session. The practice had stretched to two hours, which was longer than initially planned. Their dance team had been selected to represent their school in the district-level dance competition, where 10 schools would be participating. They listened attentively to the last-minute instructions from their instructor before they were all allowed to leave for the day.

As the twins were walking in the direction of the school parking lot, they noticed there were two people other than their parents. They were thrilled when they realized their cousins had come along with their parents to pick them up. Dad said they were all going for lunch at the restaurant adjacent to the school, which was known to serve authentic Mexican food.

"After lunch, we can walk over to the park and rent paddle boats," said Dad cheerfully.

Sara and Simone smiled and looked forward to a relaxing day ahead.

9. Which word is a **synonym** for attentively in the passage?

- **A.** intently
- **B.** straightforwardly
- **C.** clearly
- **D.** sympathetically

La Tomatina

La Tomatina is an annual festival in Spain. The festival first became popular in the 1940s after a fight broke out in the town square. People who were involved in the argument began hurling tomatoes at one another, and soon many other people became involved. Debris from the tomatoes was left everywhere, and a local festival was begun. Today, the special event is held once a year. Trucks haul in tons of tomatoes from local facilities. A starting gun is shot off to begin the throwing. For the next hour people slosh around sluggishly in handfuls of tomatoes that have been thrown. Tomato hurling in Spain has become the biggest food fight of the year.

10. Read the following sentence from the passage.

People who were involved in the argument began hurling tomatoes at one another, and soon many other people became involved.

Which of these words is an antonym of hurling?

- **A.** tossing
- **B.** stopping
- **C.** throwing
- **D.** firing

Answers: Word Relationships

1. B
2. A
3. B
4. D
5. A
6. D
7. D
8. A
9. A
10. B

Explanations

1. Synonyms are words that mean the same thing. "Promotion" and "press" both mean "the publicizing of a product or good." On MTV, artists and music labels can use promotion for CDs or concerts.

2. Synonyms are words that mean the same thing. "Lobbied" and "pushed" both mean "to influence the actions of a group."

3. Land is the opposite of sea. Dry is the opposite of wet.

4. Synonyms are words that mean the same thing. "Jockey" and "announcer" both mean "a person who introduces something." In this case, MTV took the idea of radio jockeys, or announcers, and created video jockeys, or announcers.

5. A stanza is part of a poem, just as a verse is part of a song.

6. If you mumble, your talking is hard to understand. If you scribble, your writing is hard to understand.

7. Synonyms are words that have the same meaning. The passage states that different ingredients were "substitutes" for other ingredients. This suggests that people tried making the sandwich different ways. Another word for "substitutes" is "replaces."

8. Antonyms are words that have opposite meanings. The word "debated" is the opposite of the word "socialized." Travelers were friendly with one another, and they had a good time until the train reached its destination.

9. Synonyms are words that mean the same thing. "Attentively" and "intently" both mean "to pay careful attention to something."

10. Antonyms are words that have opposite meanings. "Stopping" is the opposite of "hurling." One word means to wait in place. The other word indicates forward movement.