**#1** ID: cb8f449f

$$\frac{1}{2}y = 4$$

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

The system of equations above has solution (x , y). What is the value of x ?

A) 3

B) $\frac{7}{2}$

C) 4

D) 6

**#2** ID: bf4a8b6a

A company that provides whale-watching tours takes groups of 21 people at a time. The company's revenue is 80 dollars per adult and 60 dollars per child. If the company's revenue for one group consisting of adults and children was 1,440 dollars, how many people in the group were children?

A) 3

B) 9

C) 12

D) 18

**#3** ID: 0dd6227f

At how many points do the graphs of the equations $y = x + 20$ and $y = 8x$ intersect in the *xy*-plane?

A) 0

B) 1

C) 2

D) 8

**#4** ID: 7efe5495

$$y = 3x$$

$$2x + y = 12$$

The solution to the given system of equations is $(x\ ,\ y)$ . What is the value of $5x$ ?

A) 24

B) 15

C) 12

D) 5

**#5** ID: 71189542

A group of 202 people went on an overnight camping trip, taking 60 tents with them. Some of the tents held 2 people each, and the rest held 4 people each. Assuming all the tents were filled to capacity and every person got to sleep in a tent, exactly how many of the tents were 2-person tents?

A) 30

B) 20

C) 19

D) 18

**#6** ID: 0c541d87

Two customers purchased the same kind of bread and eggs at a store. The first customer paid $12.45$ dollars for $1$ loaf of bread and $2$ dozen eggs. The second customer paid $19.42$ dollars for $4$ loaves of bread and $1$ dozen eggs. What is the cost, in dollars, of $1$ dozen eggs?

A) 3.77

B) 3.88

C) 4.15

D) 4.34

**#7** ID: 38a43902

$$y = -2x$$

$$3x + y = 40$$

The solution to the given system of equations is $(x\ ,\ y)$. What is the value of $x$ ?

**#8** ID: 6a87902f

$$y = 2x + 10$$

$$y = 2x - 1$$

At how many points do the graphs of the given equations intersect in the $xy$-plane?

A) Zero

B) Exactly one

C) Exactly two

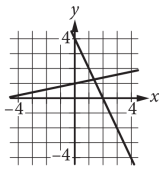
D) Infinitely many

**#9** ID: 6e6a3241

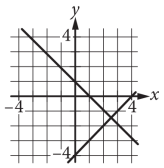
$x+5y=5$
$2x-y=-4$

Which of the following graphs in the xy-plane could be used to solve the system of equations above?

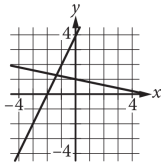
A)



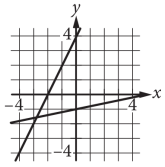

B)




C)




D)




**#10** ID: f5929f7a

$y = -\frac{1}{9}x$

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

The solution to the given system of equations is $(x, y)$. What is the value of $x$?

A) -9

B) -7

C) 0

D) 2

**#11** ID: 74c03c21

A bus traveled on the highway and on local roads to complete a trip of 160 miles. The trip took 4 hours. The bus traveled at an average speed of 55 miles per hour (mph) on the highway and an average speed of 25 mph on local roads. If $x$ is the time, in hours, the bus traveled on the highway and $y$ is the time, in hours, it traveled on local roads, which system of equations represents this situation?

A) $55x + 25y = 4$
$x + y = 160$

B) $55x + 25y = 160$
$x + y = 4$

C) $25x + 55y = 4$
$x + y = 160$

D) $25x + 55y = 160$
$x + y = 4$

## #12

ID: 8a87c2c8

$$x + 3 = -2y + 5$$

$$x - 3 = 2y + 7$$

The solution to the given system of equations is $(x\ ,\ y)$. What is the value of $2x$?

A) -2

B) 6

C) 12

D) 24

## #13

ID: 9a216c0f

The combined original price for a mirror and a vase is $\$\ 60$. After a $25\%$ discount to the mirror and a $45\%$ discount to the vase are applied, the combined sale price for the two items is $\$\ 39$. Which system of equations gives the original price $m$, in dollars, of the mirror and the original price $v$, in dollars, of the vase?

A) $m + v = 60$
$0.55m + 0.75v = 39$

B) $m + v = 60$
$0.45m + 0.25v = 39$

C) $m + v = 60$
$0.75m + 0.55v = 39$

D) $m + v = 60$
$0.25m + 0.45v = 39$

## #14

ID: ed92fb68

$$4x + 5y = 100$$
$$5x + 4y = 62$$

If the system of equations above has solution $(x, y)$, what is the value of $x + y$?

A) 0

B) 9

C) 18

D) 38

## #15

ID: 6ba39da5

$$2a + 8b = 198$$

$$2a + 4b = 98$$

The solution to the given system of equations is $(a\ ,\ b)$. What is the value of $b$?

## #16

ID: 19fdf387

In the xy-plane, the graph of $y = x + 3$ intersects the graph of $y = 2x - 6$ at the point $(a,b)$. What is the value of a?

A) 3

B) 6

C) 9

D) 12

**#17** ID: a0489274

$$y = -\frac{1}{5}x$$

$$y = \frac{1}{7}x$$

The solution to the given system of equations is $(x\ ,\ y)$. What is the value of $x$ ?

A) -5

B) 0

C) 2

D) 7

**#18** ID: c5082ce3

The score on a trivia game is obtained by subtracting the number of incorrect answers from twice the number of correct answers. If a player answered 40 questions and obtained a score of 50, how many questions did the player answer correctly?

**#19** ID: b00ad7f2

$$y - 9x = 13$$

$$5x = 2y$$

What is the solution $(x\ ,\ y)$ to the given system of equations?

A) $(\frac{5}{2}\ ,\ 1)$

B) $(1\ ,\ \frac{2}{5})$

C) $(-2\ ,\ -5)$

D) $(-5\ ,\ -2)$

**#20** ID: 79be5180

$$y = 9x + 12$$

$$x + 7y = 20$$

The solution to the given system of equations is $(x\ ,\ y)$. What is the value of $y$ ?

**#21** ID: 092ad67d

$$x + 2y = 6$$

$$x - 2y = 4$$

The solution to the given system of equations is $(x\ ,\ y)$. What is the value of $x$ ?

A) 2.5

B) 5

C) 6

D) 10

**#22** ID: d909cd31

$$-15x + 25y = 65$$

One of the two equations in a system of linear equations is given. The system has infinitely many solutions. Which of the following could be the second equation in the system?

A) $12x + 20y = 52$

B) $12x + 20y = -52$

C) $-12x + 20y = 52$

D) $-12x + 20y = -52$

**#23** ID: 79784c23

$$y = 6x + 3$$

One of the two equations in a system of linear equations is given. The system has infinitely many solutions. Which equation could be the second equation in this system?

A) $y = 2(6x) + 3$

B) $y = 2(6x + 3)$

C) $2(y) = 2(6x) + 3$

D) $2(y) = 2(6x + 3)$

**#24** ID: 9f6f96ff

A wire with a length of $106$ inches is cut into two parts. One part has a length of $x$ inches, and the other part has a length of $y$ inches. The value of $x$ is $6$ more than $4$ times the value of $y$. What is the value of $x$?

A) 25

B) 28

C) 56

D) 86

**#25** ID: 2875ba81

$$6x + 7y = 28$$
$$2x + 2y = 10$$

The solution to the given system of equations is $(x, y)$. What is the value of $y$?

A) -2

B) 7

C) 14

D) 18

**#26** ID: 4e400635

$$3x + 6 = 4y$$

$$3x + 4 = 2y$$

The solution to the given system of equations is $(x, y)$. What is the value of $y$?

**#27** ID: e77a76ce

Which of the following systems of linear equations has no solution?

A) $y = 6x + 3$
$y = 6x + 9$

B) $y = 10$
$y = 10x + 10$

C) $y = 14x + 14$
$y = 10x + 14$

D) $x = 3$
$y = 10$

## #28

ID: b3c7ca1d

Which of the following systems of linear equations has no solution?

A) $x = 3$
$y = 5$

B) $y = 6x + 6$
$y = 5x + 6$

C) $y = 16x + 3$
$y = 16x + 19$

D) $y = 5$
$y = 5x + 5$

## #29

ID: 5e422ff9

$$y = 2x - 3$$
$$3y = 5x$$

In the solution to the system of equations above, what is the value of y ?

A) $-15$

B) $-9$

C) 9

D) 15

## #30

ID: 55447be2

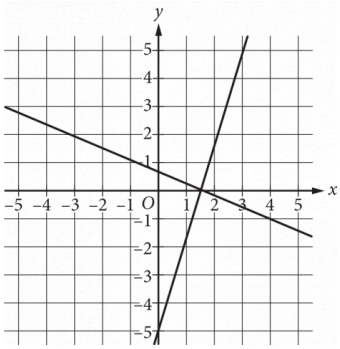
$$y = \tfrac{1}{3}x - 14$$

$$y = -x + 18$$

The solution to the given system of equations is $(x\ ,\ y)$. What is the value of $x$ ?

## #31

ID: 2704399f




Which of the following systems of equations has the same solution as the system of equations graphed above?

A) $y = 0$
$x = \frac{3}{2}$

B) $y = \frac{3}{2}$
$x = 0$

C) $y = 0$
$x = 1$

D) $y = 1$
$x = 0$

## #32

ID: a94ed4e0

$$3y = 4x + 17$$

$$-3y = 9x - 23$$

The solution to the given system of equations is $(x\ ,\ y)$. What is the value of $39x$ ?

A) -18

B) -6

C) 6

D) 18

**#33** ID: 686b7cad

A proposal for a new library was included on an election ballot. A radio show stated that 3 times as many people voted in favor of the proposal as people who voted against it. A social media post reported that 15,000 more people voted in favor of the proposal than voted against it. Based on these data, how many people voted against the proposal?

A) 7,500

B) 15,000

C) 22,500

D) 45,000

**#34** ID: e3bbde69

$$8x + y = 5$$

$$y = 9x + 1$$

The solution to the given system of equations is $(x\ ,\ y)$. What is the value of $x$ ?

A) -6

B) $\frac{4}{17}$

C) $\frac{6}{17}$

D) 4

**#35** ID: b544a348

$$5x + 3y = 38$$
$$x + 3y = 10$$

In the solution $(x, y)$ to the system of equations above, what is the value of x ?

**#36** ID: e53688cb

$$x + 3y = 29$$

$$3y = 11$$

The solution to the given system of equations is $(x\ ,\ y)$. What is the value of $x$ ?