SAT Math

Systems of Linear Equations 2

Question #	ID

2.1 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

2.2 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

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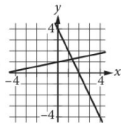
Question # **ID**

2.3 6e6a3241

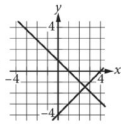
$x+5y=5$
$2x-y=-4$

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

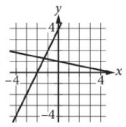
A.



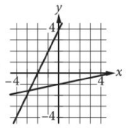
B.



C.



D.



2.4 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

2.5 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

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Question # **ID**

2.6 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

2.7 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?

2.8 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

2.9 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. $x = 3$
$y = 10$

SAT Math

Systems of Linear Equations 2

Question #	ID

2.10 5e422ff9

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

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

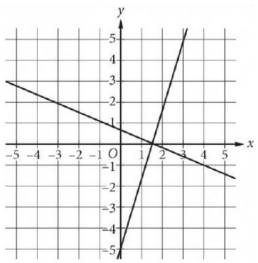
A. -15

B. -9

C. 9

D. 15

2.11 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. $y = 1$
$x = 0$

2.12 b544a348

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

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

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Systems of Linear Equations 2

Question # **ID**

2.13 e53688cb

$$x + 3y = 29$$
$$3y = 11$$

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

2.14 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

2.15 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

2.16 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

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Systems of Linear Equations 2

Question # **ID**

2.17 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

2.18 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

2.19 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. $45{,}000$

2.20 65833256

$$y = 6x + 16$$
$$-7x - y = 36$$

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

A. $(-4, -8)$

B. $(-\frac{20}{13}, -\frac{80}{13})$

C. $(4, 40)$

D. $(20, 136)$

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Question # **ID**

2.21 dcc4886a

$$y = \frac{2}{7}x + 3$$

One of the two equations in a system of linear equations is given. The system has infinitely many solutions. If the second equation in the system is $y = mx + b$, where m and b are constants, what is the value of b?

A. -3

B. $-\frac{1}{3}$

C. $\frac{1}{3}$

D. 3

2.22 6e50ce28

The sum of a number x and 7 is twice as large as a number y. The number y is 3 less than the number x. Which system of equations describes this situation?

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

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

C. $2(x + 7) = y$
$y = x - 3$

D. $2(x + 7) = y$
$y = 3 - x$

2.23 bd45df49

$$y = 3x + 9$$
$$3y = 8x - 6$$

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

A. -123

B. -33

C. 3

D. 57