

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Systems of two linear equations in two variables	■ ■ □

ID: cb8f449f

2.1

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

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

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~~

$$y = 8$$

$$x - \frac{1}{2}(8) = 2$$

$$x = 6 //$$

Desmos $\rightarrow (6, 8)$
//

Question ID 71189542

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ID: 71189542

2.2

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

$$\begin{aligned}x + y &= 60 & \textcircled{1} \\2x + 4y &= 202 & \textcircled{2}\end{aligned}$$

Desmos $\rightarrow$ (19, 41)

Question ID 6e6a3241

Assessment	Test	Domain	Skill	Difficulty
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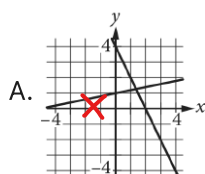
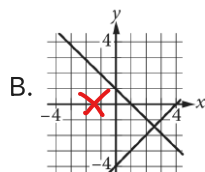
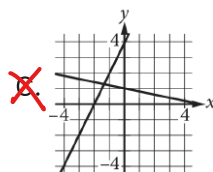
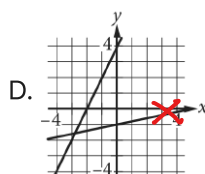
ID: 6e6a3241

2.3

$$x + 5y = 5$$

$$2x - y = -4$$

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



Desmos → ดูกราฟจาก X-intercept
Y-intercept
Slope
และตัดด้วย

Question ID f5929f7a

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ID: f5929f7a

2.4

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

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

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

$$-\frac{1}{9}x = \frac{1}{2}x$$

$$x = 0 //$$

$$y = 0 \text{ also}$$

Desmos $\rightarrow (0, 0)$
//

Question ID ed92fb68

Assessment	Test	Domain	Skill	Difficulty
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ID: ed92fb68

2.5

$$4x + 5y = 100$$

$$5x + 4y = 62$$

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

Desmos $\rightarrow (-10, 28)$
 $-10 + 28 = 18$
//

Question ID 19fdf387

Assessment	Test	Domain	Skill	Difficulty
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ID: 19fdf387

2.6

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

$$x + 3 = 2x - 6$$

$$x = 9 = a$$

$$y = 12 = b \quad (11, 12)$$

Desmos $\rightarrow$ $(9, 12)$

Question ID c5082ce3

Assessment	Test	Domain	Skill	Difficulty
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ID: c5082ce3

2.7

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?

$$\begin{aligned} 2x - y &= 50 \\ x + y &= 40 \\ x &= 30 // \\ y &= 10 \text{ and} \\ \hline \text{Desmos} &\rightarrow (30, 10) // \end{aligned}$$

Question ID 092ad67d

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ID: 092ad67d

2.8

$$x + 2y = 6$$

$$x - 2y = 4$$

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

$$2x = 10$$

$$x = 5 //$$

Desmos $\rightarrow (5, 0.5)$

Question ID e77a76ce

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ID: e77a76ce

2.9

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. $x = 3$
 $y = 10$

Slope₁ = Slope₂ and C₁ ≠ C₂

Question ID 5e422ff9

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ID: 5e422ff9

2.10

$$y = 2x - 3$$

$$3y = 5x$$

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

A. -15

B. -9

C. 9

~~D. 15~~

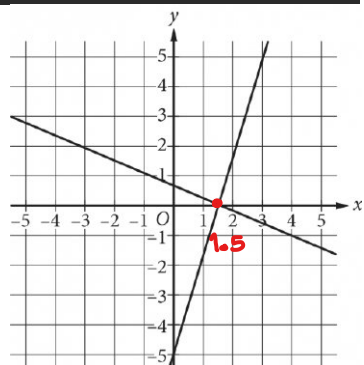
Desmos $\rightarrow (9, 15)$
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Question ID 2704399f

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ID: 2704399f

2.11



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

~~x~~ $y = 0$
 $x = \frac{3}{2}$

$x = 1.5$
 $y = 0$

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

B. $x = 0$

$y = 0$

C. $x = \text{X}$

$y = \text{X}$

D. $x = 0$

Question ID b544a348

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ID: b544a348

2.12

$$5x + 3y = 38$$

$$x + 3y = 10$$

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

Desmos $\rightarrow (7, 1)$
//

$$4x = 28$$
$$x = 7 //$$

Question ID e53688cb

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ID: e53688cb

2.13

$$x + 3y = 29$$

$$3y = 11$$

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

$$y = \frac{11}{3}$$

$$x + 3\left(\frac{11}{3}\right) = 29$$

$$x = 18 //$$

$$\text{Desmos} \rightarrow (18, 3.6667) //$$

Question ID e3bbde69

Assessment	Test	Domain	Skill	Difficulty
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ID: e3bbde69

2.14

$$\begin{aligned}8x + y &= 5 \\ y &= 9x + 1\end{aligned}$$

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 ✖

Desmos $\rightarrow (0.2353, 3.1177)$
 $\downarrow$
ใกล้กับ $\frac{4}{17} //$

Question ID a0489274

Assessment	Test	Domain	Skill	Difficulty
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ID: a0489274

2.15

$$\begin{aligned}y &= -\frac{1}{5}x \\ y &= \frac{1}{7}x\end{aligned}$$

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

$$-\frac{1}{5}x = \frac{1}{7}x$$

$$x = 0 //$$

$$y = 0 \text{ and}$$

Desmos $\rightarrow (0, 0)$
//