Question ID d1b66ae6

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

ID: d1b66ae6

$$-x+y=-3.5$$
$$x+3y=9.5$$

If (x, y) satisfies the system of equations above, what is the value of y?

ID: d1b66ae6 Answer

Rationale

The correct answer is $\frac{3}{2}$. One method for solving the system of equations for y is to add corresponding sides of the two equations. Adding the left-hand sides gives $(-x+y)+(x+3y)$, or 4y. Adding the right-hand sides yields $-3.5+9.5=6$. It follows that $4y=6$. Finally, dividing both sides of $4y=6$ by 4 yields $y=\frac{6}{4}$ or $\frac{3}{2}$. Note that 3/2 and 1.5 are examples of ways to enter a correct answer.

Question Difficulty: Hard

Question ID ff501705

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

ID: ff501705

$$\frac{3}{2}y - \frac{1}{4}x = \frac{2}{3} - \frac{3}{2}y$$
$$\frac{1}{2}x + \frac{3}{2} = py + \frac{9}{2}$$

In the given system of equations, p is a constant. If the system has no solution, what is the value of p?

ID: ff501705 Answer

Correct Answer: 6

Rationale

The correct answer is 6. A system of two linear equations in two variables, x and y, has no solution if the lines represented by the equations in the *xy*-plane are parallel and distinct. Lines represented by equations in standard form, $Ax + By = C$ and $Dx + Ey = F$, are parallel if the coefficients for x and y in one equation are proportional to the corresponding coefficients in the other equation, meaning $\frac{D}{A} = \frac{E}{B}$; and the lines are distinct if the constants are not proportional, meaning $\frac{F}{C}$ is not equal to $\frac{D}{A}$ or $\frac{E}{B}$. The first equation in the given system is $\frac{3}{2}y$ - $\frac{1}{4}x = \frac{2}{3}$ - $\frac{3}{2}y$. Multiplying each side of this equation by 12 yields $18y$ - $3x = 8$ - $18y$. Adding $18y$ to each side of this equation yields $36y$ - $3x = 8$, or -$3x + 36y = 8$. The second equation in the given system is $\frac{1}{2}x + \frac{3}{2} = py + \frac{9}{2}$. Multiplying each side of this equation by 2 yields $x + 3 = 2py + 9$. Subtracting $2py$ from each side of this equation yields $x + 3$ - $2py = 9$. Subtracting 3 from each side of this equation yields x - $2py = 6$. Therefore, the two equations in the given system, written in standard form, are -$3x + 36y = 8$ and x - $2py = 6$. As previously stated, if this system has no solution, the lines represented by the equations in the *xy*-plane are parallel and distinct, meaning the proportion $\frac{1}{-3} = \frac{-2p}{36}$, or -$\frac{1}{3} =$ - $\frac{p}{18}$, is true and the proportion $\frac{6}{8} = \frac{1}{-3}$ is not true. The proportion $\frac{6}{8} = \frac{1}{-3}$ is not true. Multiplying each side of the true proportion, -$\frac{1}{3} =$ - $\frac{p}{18}$, by -18 yields $6 = p$. Therefore, if the system has no solution, then the value of p is 6.

Question Difficulty: Hard

Question ID 70feb725

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

ID: 70feb725

During a month, Morgan ran *r* miles at 5 miles per hour and biked *b* miles at 10 miles per hour. She ran and biked a total of 200 miles that month, and she biked for twice as many hours as she ran. What is the total number of miles that Morgan biked during the month?

A. 80

B. 100

C. 120

D. 160

ID: 70feb725 Answer

Correct Answer: D

Rationale

Choice D is correct. The number of hours Morgan spent running or biking can be calculated by dividing the distance she traveled during that activity by her speed, in miles per hour, for that activity. So the number of hours she ran can be represented by the expression $\frac{r}{5}$, and the number of hours she biked can be represented by the expression $\frac{b}{10}$. It's given that she biked for twice as many hours as she ran, so this can be represented by the equation $\frac{b}{10}=2\left(\frac{r}{5}\right)$, which can be rewritten as $b=4r$. It's also given that she ran r miles and biked b miles, and that she ran and biked a total of 200 miles. This can be represented by the equation $r+b=200$. Substituting $4r$ for b in this equation yields $r+4r=200$, or $5r=200$. Solving for r yields $r=40$. Determining the number of miles she biked, b, can be found by substituting 40 for r in $r+b=200$, which yields $40+b=200$. Solving for b yields $b=160$.

Choices A, B, and C are incorrect because they don't satisfy that Morgan biked for twice as many hours as she ran. In choice A, if she biked 80 miles, then she ran 120 miles, which means she biked for 8 hours and ran for 24 hours. In choice B, if she biked 100 miles, then she ran 100 miles, which means she biked for 10 hours and ran for 20 hours. In choice C, if she biked 120 miles, then she ran for 80 miles, which means she biked for 12 hours and ran for 16 hours.

Question Difficulty: Hard

Question ID e1248a5c

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

ID: e1248a5c

In the system of equations below, *a* and *c* are constants.

$\frac{1}{2}x+\frac{1}{3}y=\frac{1}{6}$

$ax+y=c$

If the system of equations has an infinite number of solutions (x,y), what is the value of *a* ?

A. $-\frac{1}{2}$

B. 0

C. $\frac{1}{2}$

D. $\frac{3}{2}$

ID: e1248a5c Answer

Correct Answer: D

Rationale

Choice D is correct. A system of two linear equations has infinitely many solutions if one equation is equivalent to the other. This means that when the two equations are written in the same form, each coefficient or constant in one equation is equal to the corresponding coefficient or constant in the other equation multiplied by the same number. The equations in the given system of equations are written in the same form, with x and y on the left-hand side and a constant on the right-hand side of the equation. The coefficient of y in the second equation is equal to the coefficient of y in the first equation multiplied by 3. Therefore, a, the coefficient of x in the second equation, must be equal to 3 times the coefficient of x in the first equation: $a=(\frac{1}{2})(3)$, or $a=\frac{3}{2}$.

Choices A, B, and C are incorrect. When $a=-\frac{1}{2}$, $a=0$, or $a=\frac{1}{2}$, the given system of equations has one solution.

Question Difficulty: Hard

Question ID 1362ccde

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

ID: 1362ccde

$$y = 4x + 1$$
$$4y = 15x - 8$$

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

ID: 1362ccde Answer

Correct Answer: 35

Rationale

The correct answer is 35. The first equation in the given system of equations defines y as $4x + 1$. Substituting $4x + 1$ for y in the second equation in the given system of equations yields $44x + 1 = 15x$ - 8. Applying the distributive property on the left-hand side of this equation yields $16x + 4 = 15x$ - 8. Subtracting $15x$ from each side of this equation yields $x + 4 =$ - 8. Subtracting 4 from each side of this equation yields $x =$ - 12. Substituting -12 for x in the first equation of the given system of equations yields $y =$ 4-12 + 1, or $y =$ - 47. Substituting -12 for x and -47 for y into the expression x - y yields -12 - -47, or 35.

Question Difficulty: Hard

Question ID 52cb8ea4

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

ID: 52cb8ea4

$7x-5y=4$

$4x-8y=9$

If (x,y) is the solution to the system of equations above, what is the value of $3x+3y$?

A. -13

B. -5

C. 5

D. 13

ID: 52cb8ea4 Answer

Correct Answer: B

Rationale

Choice B is correct. Subtracting the second equation, $4x-8y=9$, from the first equation, $7x-5y=4$, results in $(7x-5y)-(4x-8y)=4-9$, or $7x-5y-4x+8y=5$. Combining like terms on the left-hand side of this equation yields $3x+3y=-5$.

Choice A is incorrect and may result from miscalculating $4-9$ as -13. Choice C is incorrect and may result from miscalculating $4-9$ as 5. Choice D is incorrect and may result from adding 9 to 4 instead of subtracting 9 from 4.

Question Difficulty: Hard

Question ID d7bf55e1

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

ID: d7bf55e1

A movie theater sells two types of tickets, adult tickets for $12 and child tickets for $8. If the theater sold 30 tickets for a total of $300, how much, in dollars, was spent on adult tickets? (Disregard the $ sign when gridding your answer.)

ID: d7bf55e1 Answer

Rationale

The correct answer is 180. Let a be the number of adult tickets sold and c be the number of child tickets sold. Since the theater sold a total of 30 tickets, a + c = 30. The price per adult ticket is $12, and the price per child ticket is $8. Since the theater received a total of $300 for the 30 tickets sold, it follows that 12a + 8c = 300. To eliminate c, the first equation can be multiplied by 8 and then subtracted from the second equation:

$$\begin{array}{r} 12a+8c = 300 \\ -8a-8c = -240 \\ \hline 4a+0c = 60 \end{array}$$

Because the question asks for the amount spent on adult tickets, which is 12a dollars, the resulting equation can be multiplied by 3 to give 3(4a) = 3(60) = 180. Therefore, $180 was spent on adult tickets.

Alternate approach: If all the 30 tickets sold were child tickets, their total price would be 30($8) = $240. Since the actual total price of the 30 tickets was $300, the extra $60 indicates that a certain number of adult tickets, a, were sold. Since the price of each adult ticket is $4 more than each child ticket, 4a = 60, and it follows that 12a = 180.

Question Difficulty: Hard

Question ID f718c9cf

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

ID: f718c9cf

$$5x + 14y = 45$$
$$10x + 7y = 27$$

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

ID: f718c9cf Answer

Correct Answer: 1.8, 9/5

Rationale

The correct answer is $\frac{9}{5}$. Multiplying the first equation in the given system by 2 yields $10x + 28y = 90$. Subtracting the second equation in the given system, $10x + 7y = 27$, from $10x + 28y = 90$ yields $10x + 28y$ - $10x + 7y = 90$ - 27, which is equivalent to $10x + 28y$ - $10x$ - $7y = 63$, or $21y = 63$. Dividing both sides of this equation by 21 yields $y = 3$. The value of x can be found by substituting 3 for y in either of the two given equations. Substituting 3 for y in the equation $10x + 7y = 27$ yields $10x + 73 = 27$, or $10x + 21 = 27$. Subtracting 21 from both sides of this equation yields $10x = 6$. Dividing both sides of this equation by 10 yields $x = \frac{6}{10}$, or $x = \frac{3}{5}$. Therefore, the value of xy is $\frac{3}{5}3$, or $\frac{9}{5}$. Note that 9/5 and 1.8 are examples of ways to enter a correct answer.

Question Difficulty: Hard

Question ID 466b87e3

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

ID: 466b87e3

$$y = \frac{1}{2}x + 8$$

$$y = cx + 10$$

In the system of equations above, c is a constant. If the system has no solution, what is the value of c ?

ID: 466b87e3 Answer

Rationale

The correct answer is $\frac{1}{2}$. A system of two linear equations has no solution when the graphs of the equations have the same slope and different y-intercepts. Each of the given linear equations is written in the slope-intercept form, $y = mx + b$, where m is the slope and b is the y-coordinate of the y-intercept of the graph of the equation. For these two linear equations, the y-intercepts are $(0,8)$ and $(0,10)$. Thus, if the system of equations has no solution, the slopes of the graphs of the two linear equations must be the same. The slope of the graph of the first linear equation is $\frac{1}{2}$. Therefore, for the system of equations to have no solution, the value of c must be $\frac{1}{2}$. Note that 1/2 and .5 are examples of ways to enter a correct answer.

Question Difficulty: Hard

Question ID e2e3942f

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

ID: e2e3942f

$y = 2x + 1$

$y = ax - 8$

In the system of equations above, *a* is a constant. If the system of equations has no solution, what is the value of *a* ?

A. $-\frac{1}{2}$

B. 0

C. 1

D. 2

ID: e2e3942f Answer

Correct Answer: D

Rationale

Choice D is correct. A system of two linear equations has no solution when the graphs of the equations have the same slope and different y-coordinates of the y-intercepts. Each of the given equations is written in the slope-intercept form of a linear equation, $y = mx + b$, where m is the slope and b is the y-coordinate of the y-intercept of the graph of the equation. For these two linear equations, the y-coordinates of the y-intercepts are different: 1 and -8. Thus, if the system of equations has no solution, the slopes of the two linear equations must be the same. The slope of the first linear equation is 2. Therefore, for the system of equations to have no solution, the value of a must be 2.

Choices A, B, and C are incorrect and may result from conceptual and computational errors.

Question Difficulty: Hard

Question ID f03465dc

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

ID: f03465dc

$$8x + 7y = 9$$
$$24x + 21y = 27$$

For each real number r, which of the following points lies on the graph of each equation in the *xy*-plane for the given system?

A. $(r, -\frac{8r}{7} + \frac{9}{7})$

B. $(-\frac{8r}{7} + \frac{9}{7}, r)$

C. $(-\frac{8r}{7} + 9, \frac{8r}{7} + 27)$

D. $(\frac{r}{3} + 9, -\frac{r}{3} + 27)$

ID: f03465dc Answer

Correct Answer: A

Rationale

Choice A is correct. Dividing both sides of the second equation in the given system by 3 yields $8x + 7y = 9$, which is the first equation in the given system. Therefore, the first and second equations represent the same line in the *xy*-plane. If the *x*- and *y*-coordinates of a point satisfy an equation, the point lies on the graph of the equation in the *xy*-plane. Choice A is a point with *x*-coordinate r and *y*-coordinate $-\frac{8r}{7} + \frac{9}{7}$. Substituting r for x and $-\frac{8r}{7} + \frac{9}{7}$ for y in the equation $8x + 7y = 9$ yields $8r + 7(-\frac{8}{7}r + \frac{9}{7}) = 9$. Applying the distributive property to the left-hand side of this equation yields $8r - 8r + 9 = 9$. Combining like terms on the left-hand side of this equation yields $9 = 9$, so the coordinates of the point $(r, -\frac{8}{7}r + \frac{9}{7})$ satisfy both equations in the given system. Therefore, for each real number r, the point $(r, -\frac{8}{7}r + \frac{9}{7})$ lies on the graph of each equation in the *xy*-plane for the given system.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Hard

Question ID 1e11190a

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

ID: 1e11190a

Store A sells raspberries for $5.50 per pint and blackberries for $3.00 per pint. Store B sells raspberries for $6.50 per pint and blackberries for $8.00 per pint. A certain purchase of raspberries and blackberries would cost $37.00 at Store A or $66.00 at Store B. How many pints of blackberries are in this purchase?

A. 4

B. 5

C. 8

D. 12

ID: 1e11190a Answer

Correct Answer: B

Rationale

Choice C is correct. It's given that store A sells raspberries for $\$5.50$ per pint and blackberries for $\$3.00$ per pint, and a certain purchase of raspberries and blackberries at store A would cost $\$37.00$. It's also given that store B sells raspberries for $\$6.50$ per pint and blackberries for $\$8.00$ per pint, and this purchase of raspberries and blackberries at store B would cost $\$66.00$. Let r represent the number of pints of raspberries and b represent the number of pints of blackberries in this purchase. The equation $5.50r + 3.00b = 37.00$ represents this purchase of raspberries and blackberries from store A and the equation $6.50r + 8.00b = 66.00$ represents this purchase of raspberries and blackberries from store B. Solving the system of equations by elimination gives the value of r and the value of b that make the system of equations true. Multiplying both sides of the equation for store A by 6.5 yields $5.50r6.5 + 3.00b6.5 = 37.006.5$, or $35.75r + 19.5b = 240.5$. Multiplying both sides of the equation for store B by 5.5 yields $6.50r5.5 + 8.00b5.5 = 66.005.5$, or $35.75r + 44b = 363$. Subtracting both sides of the equation for store A, $35.75r + 19.5b = 240.5$, from the corresponding sides of the equation for store B, $35.75r + 44b = 363$, yields $35.75r$ - $35.75r + 44b$ - $19.5b = 363$ - 240.5, or $24.5b = 122.5$. Dividing both sides of this equationby 24.5 yields $b = 5$. Thus, 5 pints of blackberries are in this purchase.

Choices A and B are incorrect and may result from conceptual or calculation errors. Choice D is incorrect. This is the number of pints of raspberries, not blackberries, in the purchase.

Question Difficulty: Hard

Question ID 567ac7ab

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

ID: 567ac7ab

One of the two equations in a linear system is $2x+6y=10$. The system has no solution. Which of the following could be the other equation in the system?

A. $x+3y=5$

B. $x+3y=-20$

C. $6x-2y=0$

D. $6x+2y=10$

ID: 567ac7ab Answer

Correct Answer: B

Rationale

Choice B is correct. A system of two linear equations written in standard form has no solution when the equations are distinct and the ratio of the x-coefficient to the y-coefficient for one equation is equivalent to the ratio of the x-coefficient to the y-coefficient for the other equation. This ratio for the given equation is 2 to 6, or 1 to 3. Only choice B is an equation that isn't equivalent to the given equation and whose ratio of the x-coefficient to the y-coefficient is 1 to 3.

Choice A is incorrect. Multiplying each of the terms in this equation by 2 yields an equation that is equivalent to the given equation. This system would have infinitely many solutions. Choices C and D are incorrect. The ratio of the x-coefficient to the y-coefficient in $6x-2y=0$ (choice C) is -6 to 2, or -3 to 1. This ratio in $6x+2y=10$ (choice D) is 6 to 2, or 3 to 1. Since neither of these ratios is equivalent to that for the given equation, these systems would have exactly one solution.

Question Difficulty: Hard

Question ID 75012ee7

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

ID: 75012ee7

$$2x + 3y = 7$$
$$10x + 15y = 35$$

For each real number r, which of the following points lies on the graph of each equation in the *xy*-plane for the given system?

A. $(\frac{r}{5} + 7, -\frac{r}{5} + 35)$

B. $(-\frac{3r}{2} + \frac{7}{2}, r)$

C. $(r, \frac{2r}{3} + \frac{7}{3})$

D. $(r, -\frac{3r}{2} + \frac{7}{2})$

ID: 75012ee7 Answer

Correct Answer: B

Rationale

Choice B is correct. The two given equations are equivalent because the second equation can be obtained from the first equation by multiplying each side of the equation by 5. Thus, the graphs of the equations are coincident, so if a point lies on the graph of one of the equations, it also lies on the graph of the other equation. A point x, y lies on the graph of an equation in the *xy*-plane if and only if this point represents a solution to the equation. It is sufficient, therefore, to find the point that represents a solution to the first given equation. Substituting the *x*- and *y*-coordinates of choice B, $-\frac{3r}{2} + \frac{7}{2}$ and r, for x and y, respectively, in the first equation yields $2(-\frac{3r}{2} + \frac{7}{2}) + 3r = 7$, which is equivalent to $-3r + 7 + 3r = 7$, or $7 = 7$. Therefore, the point $(-\frac{3r}{2} + \frac{7}{2}, r)$ represents a solution to the first equation and thus lies on the graph of each equation in the *xy*-plane for the given system.

Choice A is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Hard

Question ID 5e08a055

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

ID: 5e08a055

$$y = 6x + 18$$

One of the equations in a system of two linear equations is given. The system has no solution. Which equation could be the second equation in the system?

A. $-6x + y = 18$

B. $-6x + y = 22$

C. $-12x + y = 36$

D. $-12x + y = 18$

ID: 5e08a055 Answer

Correct Answer: B

Rationale

Choice B is correct. A system of two linear equations in two variables, x and y, has no solution if the lines represented by the equations in the *xy*-plane are parallel and distinct. Lines represented by equations in standard form, $Ax + By = C$ and $Dx + Ey = F$, are parallel if the coefficients for x and y in one equation are proportional to the corresponding coefficients in the other equation, meaning $\frac{D}{A} = \frac{E}{B}$; and the lines are distinct if the constants are not proportional, meaning $\frac{F}{C}$ is not equal to $\frac{D}{A}$ or $\frac{E}{B}$. The given equation, $y = 6x + 18$, can be written in standard form by subtracting $6x$ from both sides of the equation to yield $-6x + y = 18$. Therefore, the given equation can be written in the form $Ax + By = C$, where $A = -6$, $B = 1$, and $C = 18$. The equation in choice B, $-6x + y = 22$, is written in the form $Dx + Ey = F$, where $D = -6$, $E = 1$, and $F = 22$. Therefore, $\frac{D}{A} = \frac{-6}{-6}$, which can be rewritten as $\frac{D}{A} = 1$; $\frac{E}{B} = \frac{1}{1}$, which can be rewritten as $\frac{E}{B} = 1$; and $\frac{F}{C} = \frac{22}{18}$, which can be rewritten as $\frac{F}{C} = \frac{11}{9}$. Since $\frac{D}{A} = 1$, $\frac{E}{B} = 1$, and $\frac{F}{C}$ is not equal to 1, it follows that the given equation and the equation $-6x + y = 22$ are parallel and distinct. Therefore, a system of two linear equations consisting of the given equation and the equation $-6x + y = 22$ has no solution. Thus, the equation in choice B could be the second equation in the system.

Choice A is incorrect. The equation $-6x + y = 18$ and the given equation represent the same line in the *xy*-plane. Therefore, a system of these linear equations would have infinitely many solutions, rather than no solution.

Choice C is incorrect. The equation $-12x + y = 36$ and the given equation represent lines in the *xy*-plane that are distinct and not parallel. Therefore, a system of these linear equations would have exactly one solution, rather than no solution.

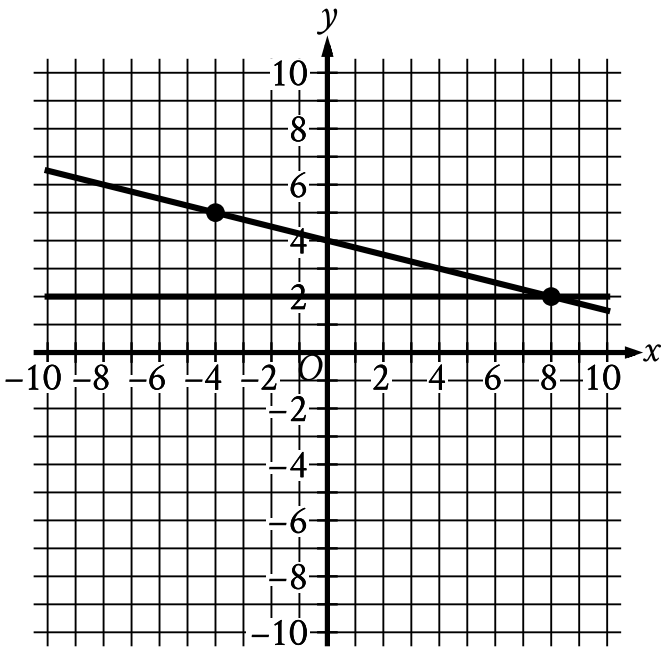
Choice D is incorrect. The equation $-12x + y = 18$ and the given equation represent lines in the *xy*-plane that are distinct and not parallel. Therefore, a system of these linear equations would have exactly one solution, rather than no solution.

Question Difficulty: Hard

Question ID 27f5fff3

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

ID: 27f5fff3



If a new graph of three linear equations is created using the system of equations shown and the equation $x + 4y = -16$, how many solutions (x, y) will the resulting system of three equations have?

A. Zero

B. Exactly one

C. Exactly two

D. Infinitely many

ID: 27f5fff3 Answer

Correct Answer: A

Rationale

Choice A is correct. A solution to a system of equations must satisfy each equation in the system. It follows that if an ordered pair x, y is a solution to the system, the point x, y lies on the graph in the *xy*-plane of each equation in the system. The only point that lies on each graph of the system of two linear equations shown is their intersection point $8, 2$. It follows that if a new graph of three linear equations is created using the system of equations shown and the graph of $x + 4y = -16$, this system has either zero solutions or one solution, the point $8, 2$. Substituting 8 for x and 2 for y in the equation $x + 4y = -16$ yields $8 + 42 = -16$, or $16 = -16$. Since this equation is not true, the point $8, 2$ does not lie on the graph of

$x + 4y = -16$. Therefore, $8, 2$ is not a solution to the system of three equations. It follows that there are zero solutions to this system.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Hard