Question ID b86123af

P'PLEUM

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

ID: b86123af

1.1

Hiro and Sofia purchased shirts and pants from a store. The price of each shirt purchased was the same and the price of each pair of pants purchased was the same. Hiro purchased 4 shirts and 2 pairs of pants for $86, and Sofia purchased 3 shirts and 5 pairs of pants for $166. Which of the following systems of linear equations represents the situation, if x represents the price, in dollars, of each shirt and y represents the price, in dollars, of each pair of pants?

A. $4x + 2y = 86$
$3x + 5y = 166$

B. $4x + 3y = 86$
$2x + 5y = 166$

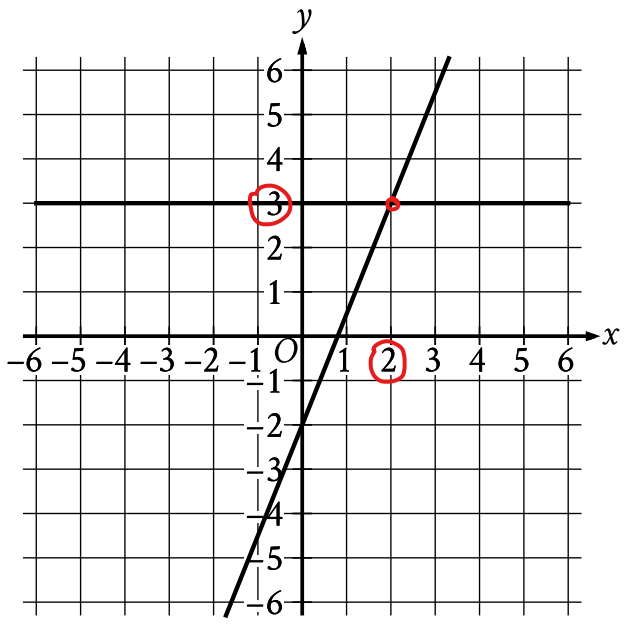
C. $4x + 2y = 166$
$3x + 5y = 86$

D. $4x + 3y = 166$
$2x + 5y = 86$

Question ID b0fc3166

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

ID: b0fc3166 1.2



The graph of a system of linear equations is shown. What is the solution (x, y) to the system?

A. $(0, 3)$

B. $(1, 3)$

C. $(2, 3)$

D. $(3, 3)$

Question ID dba8d38a

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

ID: dba8d38a 1.3

A petting zoo sells two types of tickets. The standard ticket, for admission only, costs $5. The premium ticket, which includes admission and food to give to the animals, costs $12. One Saturday, the petting zoo sold a total of 250 tickets and collected a total of $2,300 from ticket sales. Which of the following systems of equations can be used to find the number of standard tickets, s, and premium tickets, p, sold on that Saturday?

A. $\begin{aligned} s+p&=250 \\ 5s+12p&=2{,}300 \end{aligned}$

B. $\begin{aligned} s+p&=250 \\ 12s+5p&=2{,}300 \end{aligned}$

C. $\begin{aligned} 5s+12p&=250 \\ s+p&=2{,}300 \end{aligned}$

D. $\begin{aligned} 12s+5p&=250 \\ s+p&=2{,}300 \end{aligned}$

Question ID aff28230

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

ID: aff28230

1.4

$$x = 10$$
$$y = x + 21$$

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

A. 2.1

B. 10

C. 21

D. 31

$y = 10 + 21$

$= 31$ //

Question ID 8abed0fb

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

ID: 8abed0fb

1.5

$y = 2x + 3$

$x = 1$

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

A. $(1, 2)$

B. $(1, 5)$

C. $(2, 3)$

D. $(2, 7)$

$y = 2(1) + 3$

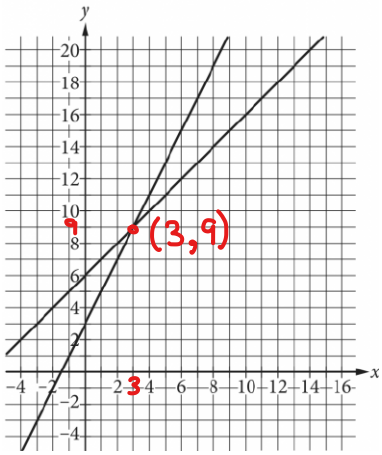
$= 5$ //

Question ID e1259a5a

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

ID: e1259a5a 1.6

A system of two linear equations is graphed in the *xy*-plane below.



Which of the following points is the solution to the system of equations?

A. (3,9)

B. (6,15)

C. (8,10)

D. (12,18)

Question ID ca9bb527

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

ID: ca9bb527

1.7

$$y = 4x - 9$$
$$y = 19$$

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

A. $(4, 19)$

B. $(7, 19)$

C. $(19, x)$

D. $(19, x)$

$19 = 4x - 9$

$x = 7$

Question ID ece00725

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

ID: ece00725

1.8

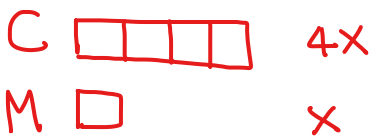
Connor has c dollars and Maria has m dollars. Connor has 4 times as many dollars as Maria, and together they have a total of $\$25.00$. Which system of equations represents this situation?

A. $c = 4m$
$c + m = 25$

B. $m = 4c$
$c + m = 25$

C. $c = 25m$
$c + m = 4$

D. $m = 25c$
$c + m = 4$



$C = 4M$ //
$C + M = 25$ //

Question ID ee031767

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

ID: ee031767

1.9

A dance teacher ordered outfits for students for a dance recital. Outfits for boys cost $26, and outfits for girls cost $35. The dance teacher ordered a total of 28 outfits and spent $881. If b represents the number of outfits the dance teacher ordered for boys and g represents the number of outfits the dance teacher ordered for girls, which of the following systems of equations can be solved to find b and g ?

A. $26b + 35g = 28$
$b + g = 881$

B. $26b + 35g = 881$
$b + g = 28$

C. $26g + 35b = 28$
$b + g = 881$

D. $26g + 35b = 881$
$b + g = 28$

Question ID cd33b015

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

ID: cd33b015

1.10

$$x + y = 20 \quad ①$$
$$2(x + y) + 3y = 85 \quad ②$$

If (x, y) is the solution to the given system of equations, what is the value of y?

Desmos → (5 , 15)

A. 10

~~B.~~ 15

C. 60

D. 65

Question ID 0d1dca87

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

ID: 0d1dca87

1.11

$$3x + y = 29$$
$$x = 2$$

If (x, y) is the solution to the given system of equations, what is the value of y ?

$3(2) + y = 29$

$y = 23$ //

Question ID 0df106df

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

ID: 0df106df

1.12

An online bookstore sells novels and magazines. Each novel sells for $4, and each magazine sells for $1. If Sadie purchased a total of 11 novels and magazines that have a combined selling price of $20, how many novels did she purchase?

A. 2

B. 3

C. 4

D. 5

$4x + y = 20$ ①

$x + y = 11$ ②

Desmos → (3, 8)

Question ID 7d89376f

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

ID: 7d89376f 1.13

A discount airline sells a certain number of tickets, x, for a flight for $90 each. It sells the number of remaining tickets, y, for $250 each. For a particular flight, the airline sold 120 tickets and collected a total of $27,600 from the sale of those tickets. Which system of equations represents this relationship between x and y ?

A. $\begin{cases} x+y=120 \\ 90x+250y=27,600 \end{cases}$

B. $\begin{cases} x+y=120 \\ 90x+250y=120(27,600) \end{cases}$

C. $\begin{cases} x+y=27,600 \\ 90x+250y=120(27,600) \end{cases}$

D. $\begin{cases} 90x=250y \\ 120x+120y=27,600 \end{cases}$

$x + y = 120$ //

$90x + 250y = 27,600$ //

Question ID 17f176ec

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

ID: 17f176ec 1.14

A movie theater charges $11 for each full-price ticket and $8.25 for each reduced-price ticket. For one movie showing, the theater sold a total of 214 full-price and reduced-price tickets for $2,145. Which of the following systems of equations could be used to determine the number of full-price tickets, f, and the number of reduced-price tickets, r, sold?

A. $f+r=2{,}145$
$11f+8.25r=214$

B. $f+r=214$
$11f+8.25r=2{,}145$

C. $f+r=214$
$8.25f+11r=2{,}145$

D. $f+r=2{,}145$
$8.25f+11r=214$

$f + r = 214$ //
$11f + 8.25r = 2{,}145$ //

Question ID 44d65912

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

ID: 44d65912 1.15

Angela is playing a video game. In this game, players can score points only by collecting coins and stars. Each coin is worth c points, and each star is worth s points.

- The first time she played, Angela scored 700 points. She collected 20 coins and 10 stars.
- The second time she played, Angela scored 850 points. She collected 25 coins and 12 stars.

Which system of equations can be used to correctly determine the values of c and s ?

A. $10c + 20s = 700$
$12c + 25s = 850$

B. $20c + 10s = 700$
$25c + 12s = 850$

C. $20c + 700s = 10$
$25c + 850s = 12$

D. $700c + 20s = 10$
$850c + 25s = 12$

Question ID 4b76c7f1

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

ID: 4b76c7f1

1.16

$$2x+7y=9$$
$$8x+28y=a$$

×4

In the given system of equations, a is a constant. If the system has infinitely many solutions, what is the value of a ?

A. 4

B. 9

C. 36

D. 54

Question ID 939fc21b

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

ID: 939fc21b

1.17

$$s + 7r = 27$$
$$r = 3$$

What is the solution (r, s) to the given system of equations?

A. $(6, 3)$

B. $(3, 6)$

C. $(3, 27)$

D. $(27, 3)$

$S + 7(3) = 27$

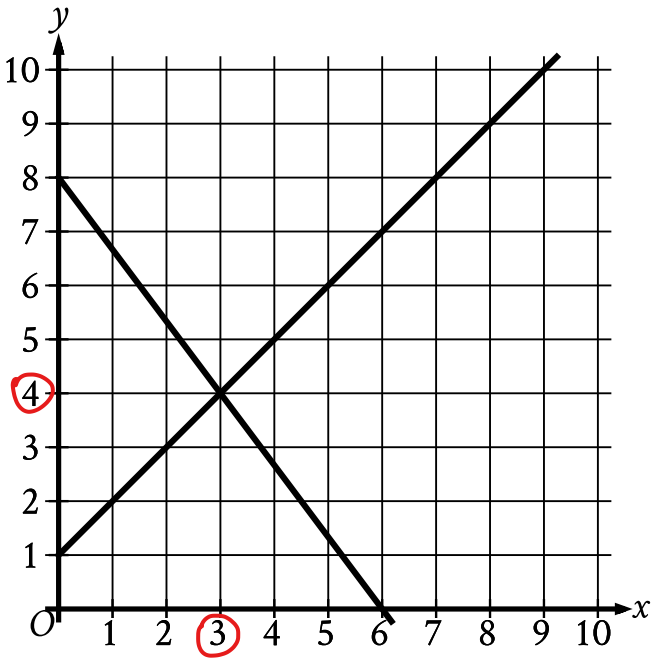
$S = 6$

Question ID e6545fa8

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

ID: e6545fa8

1.18



The graph of a system of linear equations is shown. What is the solution (x, y) to the system?

A. $(2, 3)$

B. $(3, 4)$

C. $(4, 5)$

D. $(5, 6)$

Question ID f5563c26

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

ID: f5563c26

1.19

$$y = 4$$
$$x = y + 6$$

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

A. 10

B. 6

C. 4

D. 2

$x = 4 + 6$
$= 10$ //