Question ID b0e72232

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

ID: b0e72232

$$3x = 36y - 45$$

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

A. $x = 4y$

B. $\frac{1}{3}x = 4y$

C. $x = 12y - 15$

D. $\frac{1}{3}x = 12y - 15$

Question ID 0876dbef

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

ID: 0876dbef

$$\frac{7}{8}y - \frac{5}{8}x = \frac{4}{7} - \frac{7}{8}y$$
$$\frac{5}{4}x + \frac{7}{4} = py + \frac{15}{4}$$

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

Question ID 90c618a3

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

ID: 90c618a3

$$4x - 6y = 10y + 2$$
$$ty = \frac{1}{2} + 2x$$

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

Question ID 8f9ba995

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

ID: 8f9ba995

$$-12x + 14y = 36$$
$$-6x + 7y = -18$$

How many solutions does the given system of equations have?

A. Exactly one

B. Exactly two

C. Infinitely many

D. Zero

Question ID 4898aa47

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

ID: 4898aa47

$$\frac{7}{2}x + 6y = 25$$
$$\frac{5}{2}x + 6y = 23$$

The solution to the given system of equations is (x, y). What is the value of $\frac{17}{2}x + 18y$?

A. 2

B. 3

C. 48

D. 71

Question ID 3eb27778

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

ID: 3eb27778

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

Question ID e5b53db0

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

ID: e5b53db0

$$ax + by = 72$$
$$6x + 2by = 56$$

In the given system of equations, a and b are constants. The graphs of these equations in the *xy*-plane intersect at the point $(4, y)$. What is the value of a?

A. 3

B. 4

C. 6

D. 14

Question ID 31dc807b

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

ID: 31dc807b

$$-x - wy = -337$$
$$2x - wy = 47$$

In the given system of equations, w is a constant. In the *xy*-plane, the graphs of these equations intersect at the point $(q, 19)$, where q is a constant. What is the value of w?

Question ID 5cc1eacc

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

ID: 5cc1eacc

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

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

Question ID a32041f6

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

ID: a32041f6

$$6 + 7r = pw$$
$$7r - 5w = 5w + 11$$

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