Question ID 90990b9a

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 90990b9a

$$x = 49$$
$$y = \sqrt{x} + 9$$

The graphs of the given equations intersect at the point (x, y) in the *xy*-plane. What is the value of y?

A. 16

B. 40

C. 81

D. 130

Question ID 097bd3c9

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 097bd3c9

$$y - 57 = px$$

The given equation relates the positive numbers p, x, and y. Which equation correctly expresses y in terms of p and x?

A. $y = 57x + p$

B. $y = px + 57$

C. $y = 57px$

D. $y = \frac{px}{57}$

Question ID 07e83fd6

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 07e83fd6

$$b = 42cf$$

The given equation relates the positive numbers b, c, and f. Which equation correctly expresses c in terms of b and f?

A. $c = \frac{b}{42f}$

B. $c = \frac{b-42}{f}$

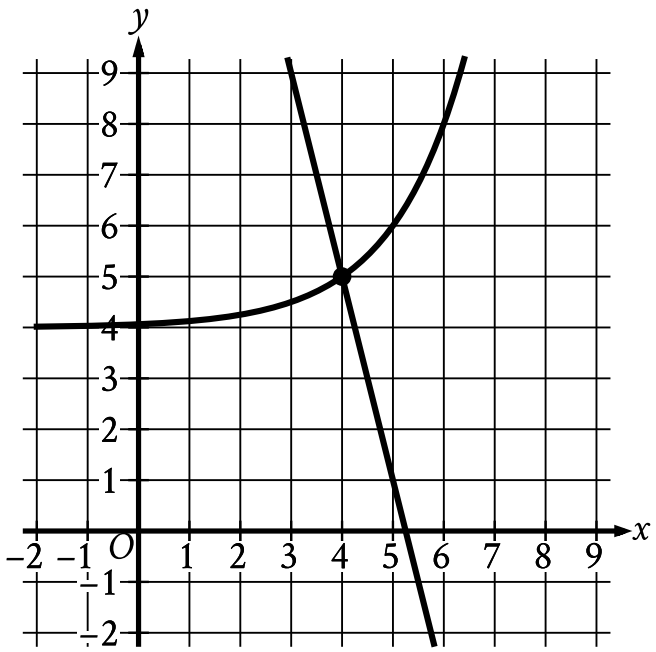
C. $c = 42bf$

D. $c = 42 - b - f$

Question ID e11a5b89

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: e11a5b89



The graph of a system of a linear equation and a nonlinear equation is shown. What is the solution (x, y) to this system?

A. $(0, 0)$

B. $(0, 4)$

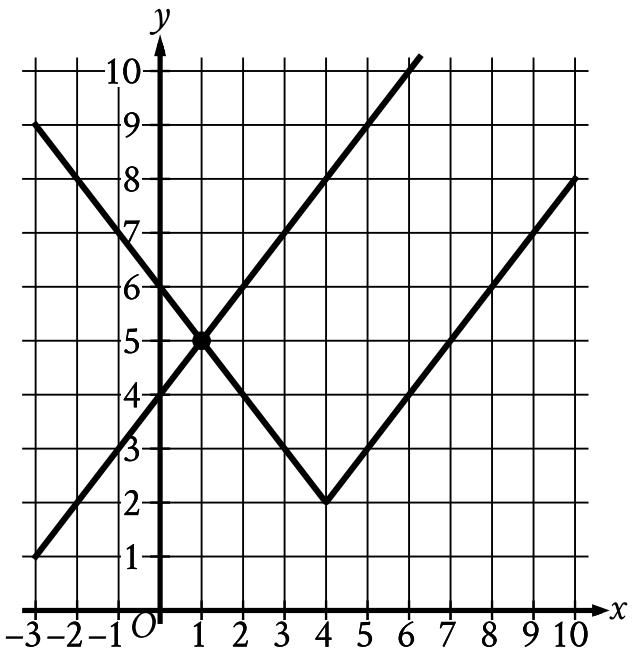
C. $(4, 5)$

D. $(5, 0)$

Question ID 6b969570

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 6b969570



The graph of a system of an absolute value function and a linear function is shown. What is the solution (x, y) to this system of two equations?

A. $(-1, 5)$

B. $(0, 4)$

C. $(1, 5)$

D. $(4, 2)$

Question ID 12511afa

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 12511afa

$$|x - 5| = 10$$

What is one possible solution to the given equation?

Question ID d824ccc7

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: d824ccc7

$$k^2 - 53 = 91$$

What is the positive solution to the given equation?

A. 144

B. 72

C. 38

D. 12

Question ID c3f59ee7

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: c3f59ee7

$$c - 7 = 25p + k$$

The given equation relates the positive numbers c, p, and k. Which equation correctly expresses c in terms of p and k?

A. $c = 25p + k + 7$

B. $c = 25p + k - 7$

C. $c = 7(25p + k)$

D. $c = \frac{25p + k}{7}$

Question ID 9751dd5e

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 9751dd5e

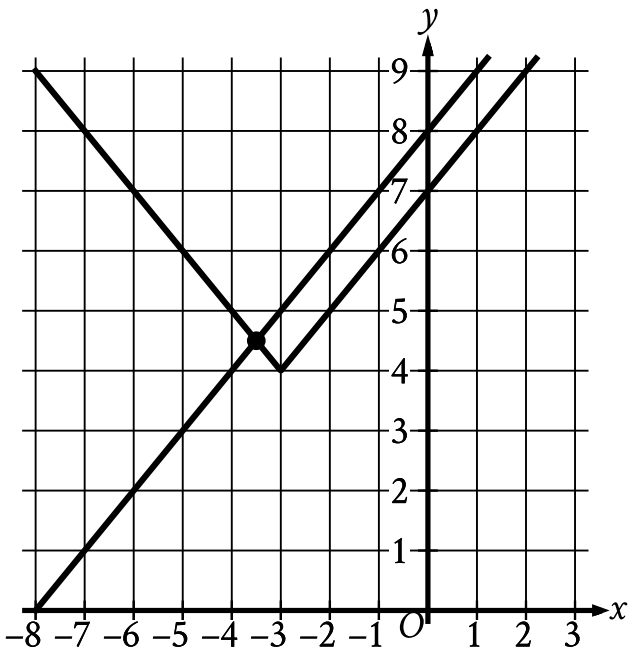
$$5|x| = 45$$

What is the positive solution to the given equation?

Question ID 962dce31

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 962dce31



The graph of a system of an absolute value function and a linear function is shown. What is the solution (x, y) to this system of two equations?

A. $(0, 8)$

B. $(\frac{7}{2}, \frac{9}{2})$

C. $(-\frac{7}{2}, \frac{9}{2})$

D. $(-3, 4)$

Question ID 13f26a62

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 13f26a62

$$\frac{x^2}{25} = 36$$

What is a solution to the given equation?

A. 6

B. 30

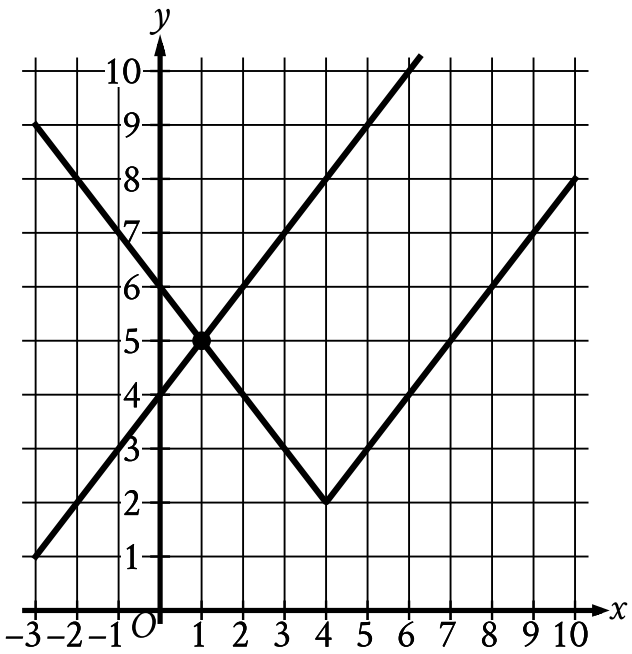
C. 450

D. 900

Question ID 6b969570

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 6b969570



The graph of a system of an absolute value function and a linear function is shown. What is the solution (x, y) to this system of two equations?

A. $(-1, 5)$

B. $(0, 4)$

C. $(1, 5)$

D. $(4, 2)$

Question ID 7d20509f

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 7d20509f

$$y = 76$$
$$y = x^2 - 5$$

The graphs of the given equations in the *xy*-plane intersect at the point (x, y). What is a possible value of x?

A. $-\frac{76}{5}$

B. -9

C. 5

D. 76

Question ID 66966d5b

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 66966d5b

$$p + 34 = q + r$$

The given equation relates the variables p, q, and r. Which equation correctly expresses p in terms of q and r?

A. $p = q + r + 34$

B. $p = q + r - 34$

C. $p = -q - r + 34$

D. $p = -q - r - 34$

Question ID eae912fb

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: eae912fb

$$x + 7 = 10$$
$$(x + 7)^2 = y$$

Which ordered pair (x, y) is a solution to the given system of equations?

A. $(3, 100)$

B. $(3, 3)$

C. $(3, 10)$

D. $(3, 70)$

Question ID f392eb64

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: f392eb64

$$|x - 2| = 9$$

What is one possible solution to the given equation?

Question ID 5a018bb6

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 5a018bb6

$$8j = k + 15m$$

The given equation relates the distinct positive numbers j, k, and m. Which equation correctly expresses j in terms of k and m?

A. $j = \frac{k}{8} + 15m$

B. $j = k + \frac{15m}{8}$

C. $j = 8(k + 15m)$

D. $j = \frac{k+15m}{8}$

Question ID 44f0984a

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 44f0984a

$$|x + 45| = 48$$

What is the positive solution to the given equation?

A. 3

B. 48

C. 93

D. 96

Question ID 3b1af658

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 3b1af658

$$x = 8$$
$$y = x^2 + 8$$

The graphs of the equations in the given system of equations intersect at the point (x, y) in the *xy*-plane. What is the value of y?

A. 8

B. 24

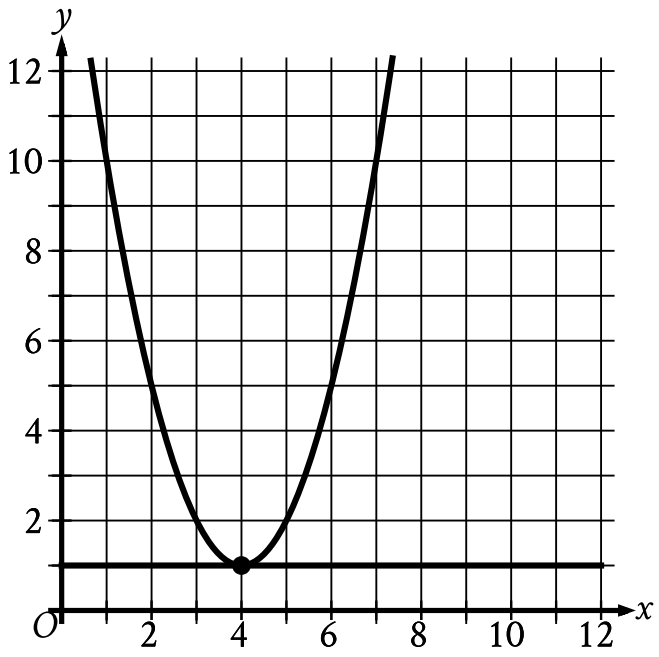
C. 64

D. 72

Question ID 88032a85

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 88032a85



The graph of a system of a linear and a quadratic equation is shown. What is the solution (x, y) to this system?

A. $(0, 0)$

B. $(-4, 1)$

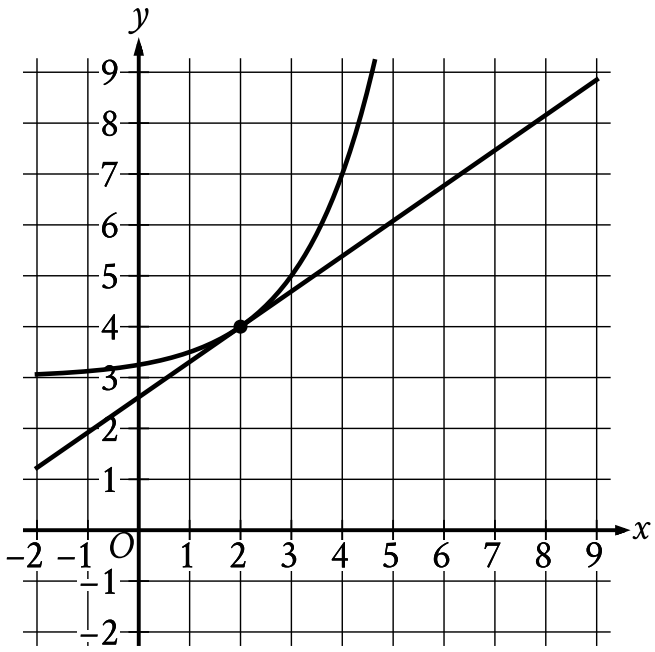
C. $(4, -1)$

D. $(4, 1)$

Question ID 9c7ef949

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 9c7ef949



The graph of a system of a linear equation and a nonlinear equation is shown. What is the solution (x, y) to this system?

A. $(0, 0)$

B. $(0, 2)$

C. $(2, 4)$

D. $(4, 0)$

Question ID 02929ad6

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 02929ad6

$$(x+2)(x-5)(x+9)=0$$

What is a positive solution to the given equation?

A. 3

B. 4

C. 5

D. 18

Question ID e798aedd

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: e798aedd

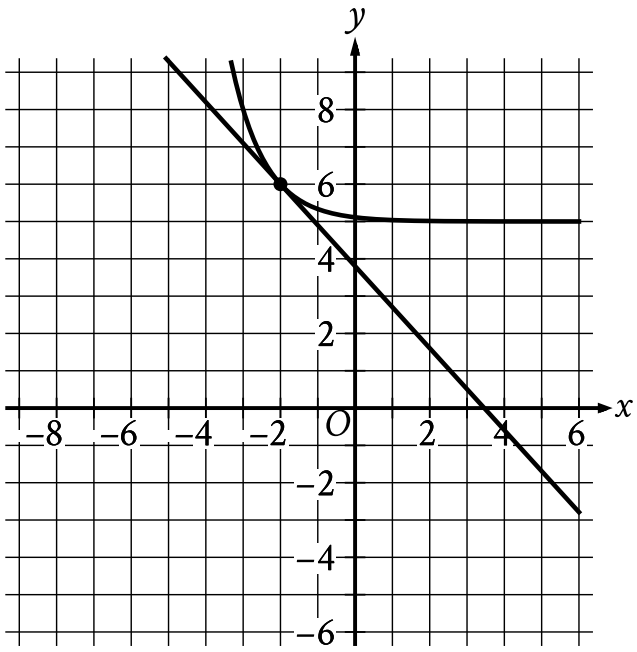
$$x^2 = (22)(22)$$

What is the positive solution to the given equation?

Question ID 67303cf4

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 67303cf4



The graph of a system of a linear equation and a nonlinear equation is shown. What is the solution (x, y) to this system?

A. $(6, 0)$

B. $(-2, 6)$

C. $(0, -2)$

D. $(0, 0)$

Question ID 17ce8f0e

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 17ce8f0e

$$x = 3$$
$$y = (15 - x)^2$$

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

A. 432

B. 54

C. 45

D. 18

Question ID 3e50584f

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 3e50584f

$$3x^2 - 15x + 18 = 0$$

How many distinct real solutions are there to the given equation?

A. Exactly one

B. Exactly two

C. Infinitely many

D. Zero

Question ID 05af32fe

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 05af32fe

$$q - 29r = s$$

The given equation relates the positive numbers q, r, and s. Which equation correctly expresses q in terms of r and s?

A. $q = s - 29r$

B. $q = s + 29r$

C. $q = 29rs$

D. $q = -\frac{s}{29r}$

Question ID 001497f6

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 001497f6

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

Which ordered pair (x, y) is a solution to the given system of equations?

A. $(0, 0)$

B. $(0, 4)$

C. $(8, 44)$

D. $(8, 84)$

Question ID e935f479

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: e935f479

$$7m = 2(n + p)$$

The given equation relates the positive numbers m, n, and p. Which equation correctly gives m in terms of n and p?

A. $m = \frac{2(n+p)}{7}$

B. $m = 2(n + p)$

C. $m = 2(n + p) - 7$

D. $m = 2 - n - p - 7$

Question ID 2e4d4640

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 2e4d4640

$$6r = 7s + t$$

The given equation relates the variables r, s, and t. Which equation correctly expresses s in terms of r and t?

A. $s = 42r - t$

B. $s = 7(6r - t)$

C. $s = \frac{6}{7}r - t$

D. $s = \frac{6r - t}{7}$

Question ID 376d4f16

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Nonlinear equations in one variable and systems of equations in two variables	Easy

ID: 376d4f16

$$|p| + 61 = 65$$

Which value is a solution to the given equation?

A. $\frac{65}{61}$

B. 4

C. 126

D. 130