

#1

ID: 3c95093c

$$6x - 9y > 12$$

Which of the following inequalities is equivalent to the inequality above?

- A) $x - y > 2$
- B) $2x - 3y > 4$
- C) $3x - 2y > 4$
- D) $3y - 2x > 2$

#2

ID: 1e003284

$$x = 49$$

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

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

#3

ID: c6a26e14

$$|x + 45| = 48$$

What is the positive solution to the given equation?

- A) 3
- B) 48
- C) 93
- D) 96

#4

ID: ad03127d

$$6r = 7s + t$$

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

#5

ID: 84e5e36c

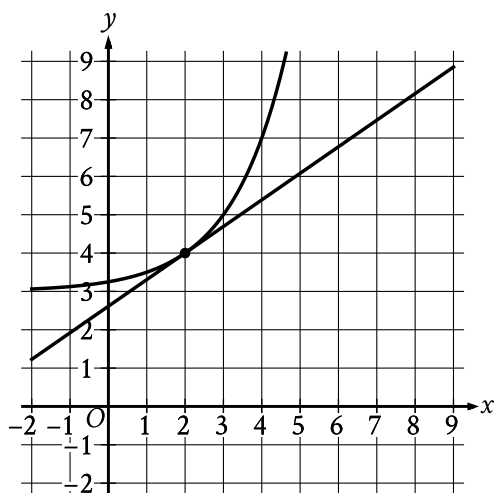
$$\begin{aligned}y &= 76 \\ y &= x^2 - 5\end{aligned}$$

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

#6

ID: 4ca30186



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) $(4, 0)$

#7

ID: 3de7a7d7

Which of the following is a solution to the equation

$$2x^2 - 4 = x^2?$$

- A) 1
- B) 2
- C) 3
- D) 4

#8

ID: 70f98ab4

$$q - 29r = s$$

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) $q = -\frac{s}{29r}$

#9

ID: 88867d37

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

What is a positive solution to the given equation?

- A) 3
- B) 4
- C) 5
- D) 18

#10

ID: 7cb3a8ee

$$|x - 5| = 10$$

What is one possible solution to the given equation?

#13

ID: 5639dd1a

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

What is the positive solution to the given equation?

#11

ID: 0bebc08c

$$x = 3$$

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

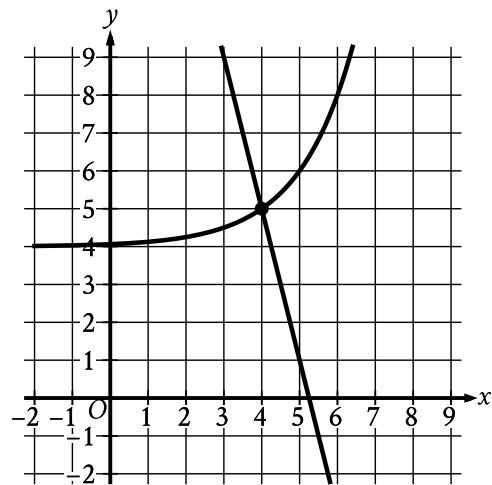
A solution to the given system of equations is (x, y) .

What is the value of xy ?

- A) 432
- B) 54
- C) 45
- D) 18

#14

ID: 3f8d5876



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) $(5, 0)$

#12

ID: c1964c11

$$p + 34 = q + r$$

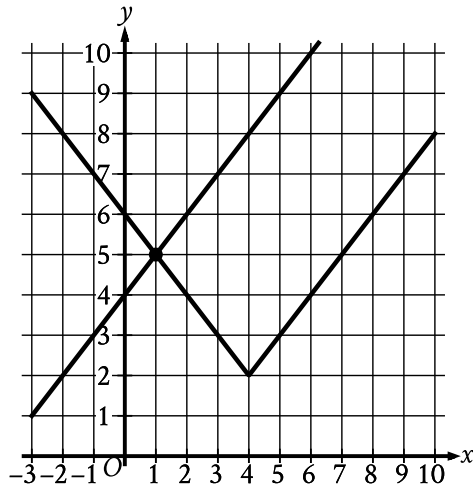
The given equation relates the variables p , q , and r .

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) $p = -q - r - 34$

#15

ID: d3f7c429



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) $(4, 2)$

#16

ID: b8c4a1cd

$$8j = k + 15m$$

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

#17

ID: 568aaf27

$$x + y = 12$$

$$y = x^2$$

If (x, y) is a solution to the system of equations above, which of the following is a possible value of x ?

- A) 0
- B) 1
- C) 2
- D) 3

#18

ID: 3cce51ea

$$|p| + 61 = 65$$

Which value is a solution to the given equation?

- A) $\frac{65}{61}$
- B) 4
- C) 126
- D) 130

#19

ID: 7a8cb72a

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

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) $m = 2 - n - p - 7$

#20

ID: 7399c3b0

$$k^2 - 53 = 91$$

What is the positive solution to the given equation?

- A) 144
- B) 72
- C) 38
- D) 12

#21

ID: b76a2815

$$P = \frac{W}{t}$$

The power P produced by a machine is represented by the equation above, where W is the work performed during an amount of time t . Which of the following correctly expresses W in terms of P and t ?

- A) $W = Pt$
- B) $W = \frac{P}{t}$
- C) $W = \frac{t}{P}$
- D) $W = P + t$

#22

ID: a67a439d

$$x + 7 = 10$$

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

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)

#23

ID: ce940f80

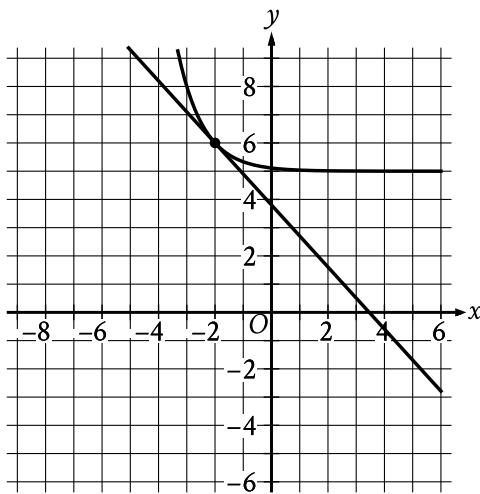
$$\frac{x^2}{25} = 36$$

What is a solution to the given equation?

- A) 6
- B) 30
- C) 450
- D) 900

#24

ID: 5c7d5744



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) $(0, 0)$

#25

ID: c7789423

$$|x - 2| = 9$$

What is one possible solution to the given equation?

#26

ID: c8bf5313

$$x = 8$$

$$y = x^2 + 8$$

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

#27

ID: eb268057

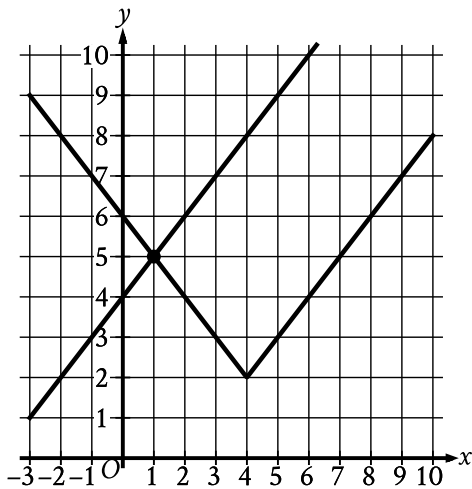
$$x^2 = 64$$

Which of the following values of x satisfies the given equation?

- A) **-8**
- B) 4
- C) 32
- D) 128

#28

ID: dd3a910a



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) $(4, 2)$

#29

ID: 98f735f2

The total revenue from sales of a product can be calculated using the formula $T = PQ$, where T is the total revenue, P is the price of the product, and Q is the quantity of the product sold. Which of the following equations gives the quantity of product sold in terms of P and T ?

- A) $Q = \frac{P}{T}$
- B) $Q = \frac{T}{P}$
- C) $Q = PT$
- D) $Q = T - P$

#30

ID: d964bc26

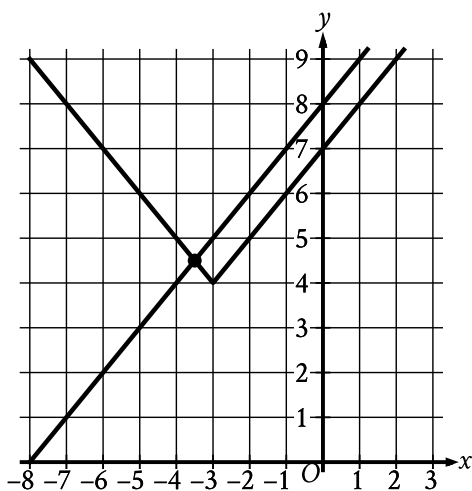
$$y - 57 = px$$

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) $y = \frac{px}{57}$

#31

ID: 494d247d



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) $(-3, 4)$

#32

ID: fcb78856

$$b = 42cf$$

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) $c = 42 - b - f$

#33

ID: bf704c34

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

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

#34

ID: 4236c5a3

If $(x+5)^2 = 4$, which of the following is a possible value of x ?

- A) 1
- B) -1
- C) -2
- D) -3

#35

ID: f11ffa93

$$\sqrt{x+4} = 11$$

What value of x satisfies the equation above?