

Question 1 of 7

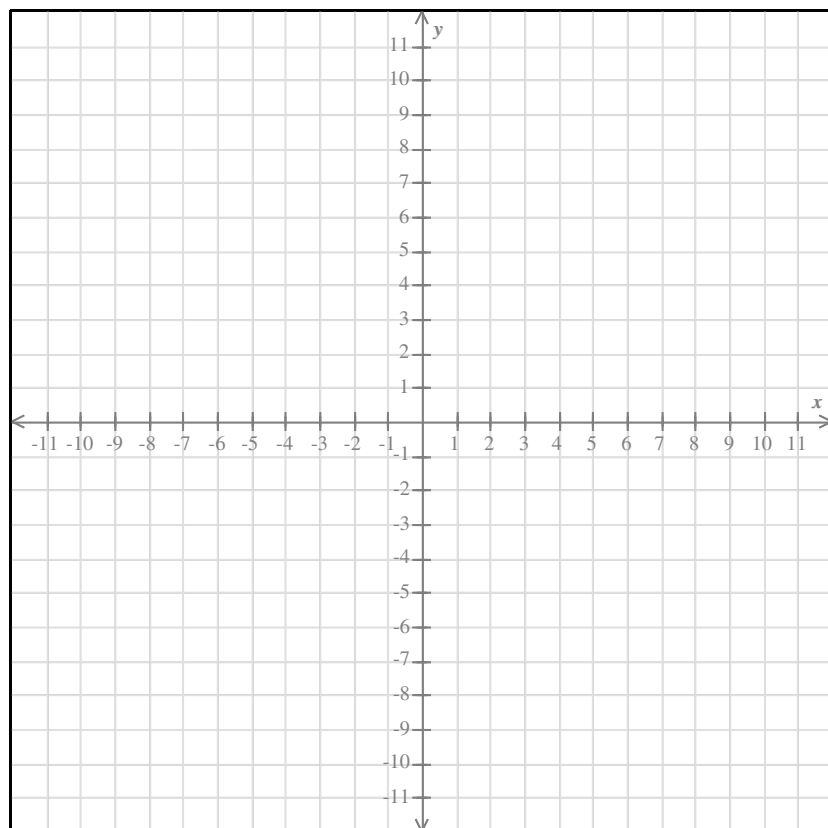
- (a) Graph the equations in the system.
- (b) Solve the system by using the substitution method.

$$x^2 + y^2 = 100$$

$$8y = -6x$$

Part 1 of 2

- (a) Graph the equations in the system.



Part 2 of 2

(b) Solve the system by using the substitution method.

The solution set is .

Question 2 of 7

(a) Graph the equations in the system.

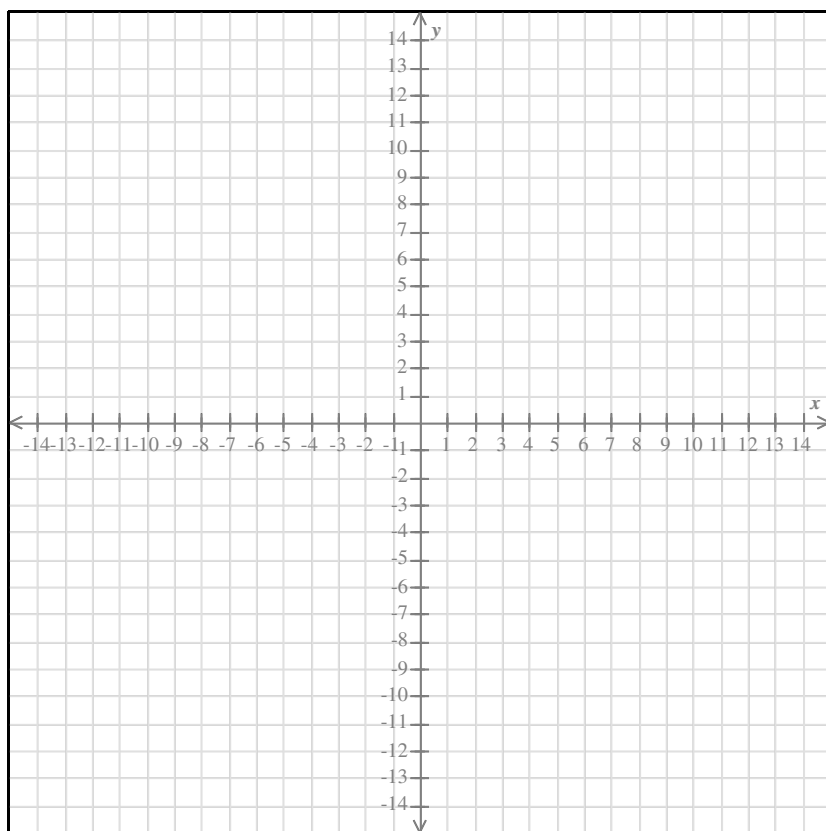
(b) Solve the system by using the substitution method.

$$y = \sqrt{x}$$

$$x^2 + y^2 = 6$$

Part 1 of 2

(a) Graph the equations in the system.



Part 2 of 2

(b) Solve the system by using the substitution method.

The solution set is .

Question 3 of 7

(a) Graph the equations in the system.

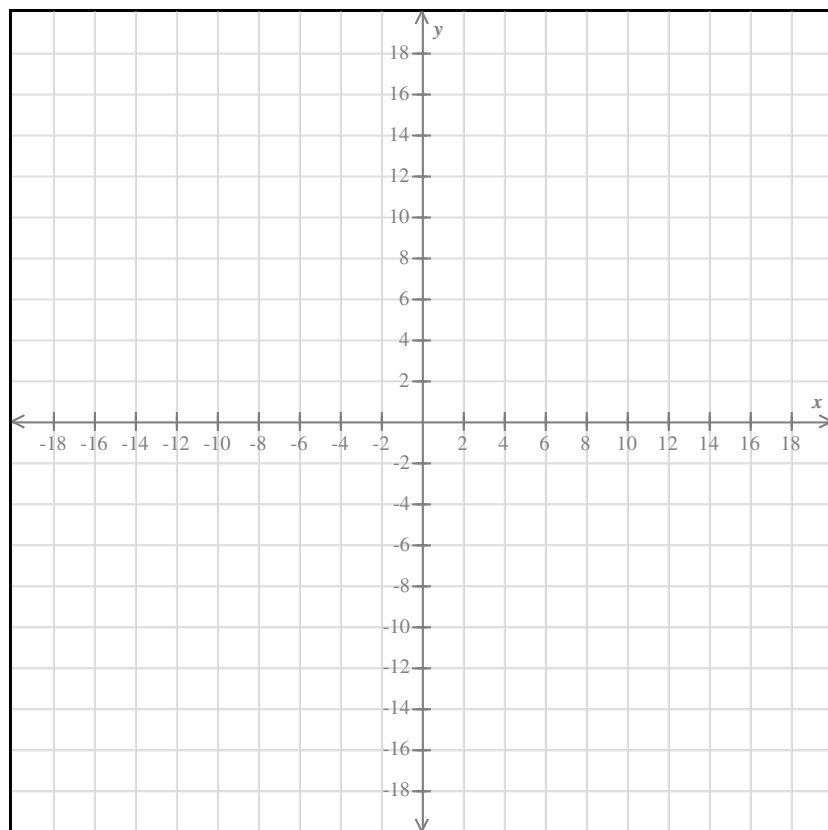
(b) Solve the system by using the substitution method.

$$y = (x - 2)^2 - 1$$

$$y = -2x + 6$$

Part 1 of 2

(a) Graph the equations in the system.



Part 2 of 2

(b) Solve the system by using the substitution method.

The solution set is .

Question 4 of 7

Find two numbers whose sum is 10 and whose product is 16. Write the answers as integers or simplified fractions.

The numbers are and .

Question 5 of 7

The difference of two positive numbers is 1 and the difference of their squares is 21. Find the numbers. If there is more than one pair, use the "or" button. Give the answer in simplest form.

The pair(s) of numbers: and

Question 6 of 7

Find the dimensions of a rectangle whose perimeter is 46 cm and whose area is 120 cm^2 .

Part 1 of 6

Let x represent the length of the rectangle.

Let y represent the width of the rectangle.

The statement of the problem gives two independent relationships between the length and the width of the rectangle.

The perimeter of the rectangle is 46 cm.

$$\boxed{} = 46$$

The area is 120 cm^2 .

$$\boxed{} = 120$$

Part 2 of 6

Using the substitution method, solve for x or y in either equation.

A $2x + 2y = 46$

B $xy = 120$ $\xrightarrow{\text{Solve for } y.}$ $y = \boxed{}$

Part 3 of 6

Substitute $y = \frac{120}{x}$ from equation **B** into equation **A**.

A $2x + 2\left(\frac{120}{x}\right) = 46$
 $2x + \boxed{} = 46$

Part 4 of 6

Multiply both sides by the LCD to clear fractions.

$$x \cdot \left(2x + \frac{240}{x} \right) = x \cdot (46)$$

$$\boxed{} + \boxed{} = \boxed{}$$

Part 5 of 6

The resulting equation is quadratic.

$$2x^2 - 46x + 240 = 0$$

Factor the left side.

$$2(x^2 - 23x + 120) = 0$$

$$2(\boxed{})(\boxed{}) = 0$$

$$x = \boxed{} \text{ or } x = \boxed{}$$

There are two possible values for the length x .

Substitute $x = 15$ and $x = 8$ into the equation $y = \frac{120}{x}$.

$$x = 15: \quad y = \frac{120}{15} = \boxed{}$$

$$x = 8: \quad y = \frac{120}{8} = \boxed{}$$

Thus, the rectangle is $\boxed{}$ cm by $\boxed{}$ cm.

Question 7 of 7

Find two numbers whose sum is 14 and whose product is 45. Write the answers as integers or simplified fractions.

The numbers are $\boxed{}$ and $\boxed{}$.