

Algebra I Lesson #3 Unit 12
Class Worksheet #3
For Worksheets #4 - #6

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. **One number is one more than two times another. Their product is 15. What are the numbers?**

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. **One number is one more than two times another. Their product is 15. What are the numbers?**

x

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. **One number is one more than two times another. Their product is 15. What are the numbers?**

x
 $2x$

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. **One number is one more than two times another. Their product is 15. What are the numbers?**

$$\begin{array}{l} x \\ 2x + \end{array}$$

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. **One number is one more than two times another. Their product is 15. What are the numbers?**

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array} \quad x($$

Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array} \quad x(2x + 1)$$

Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

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Represent all unknowns in terms of the same variable.

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$$\begin{array}{l} x \\ 2x + 1 \end{array} \quad x(2x + 1) = 15$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array} \quad \begin{array}{l} x(2x + 1) = 15 \\ 2x^2 \end{array}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array} \quad \begin{array}{l} x(2x + 1) = 15 \\ 2x^2 + x \end{array}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$\begin{array}{l} x(2x + 1) = 15 \\ 2x^2 + x - 15 \end{array}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$\begin{array}{l} x(2x + 1) = 15 \\ 2x^2 + x - 15 = 0 \end{array}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 3)(x + 5) = 0$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

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$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$\begin{array}{l} x \\ 2x + 1 \end{array} \quad \begin{array}{l} x(2x + 1) = 15 \\ 2x^2 + x - 15 = 0 \\ (2x - 5)(x + 3) = 0 \\ 2x - 5 = 0 \text{ or } x + 3 = 0 \end{array}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x =$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

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$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x = 5$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x = 5$$

$$x =$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x = 5$$

$$x = 2.5$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x = 5$$

$$x = 2.5 \text{ or}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x = 5$$

$$x = 2.5 \text{ or } x =$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x = 5$$

$$x = 2.5 \text{ or } x = -3$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{aligned}x & & x(2x + 1) & = & 15 \\2x + 1 & & 2x^2 + x - 15 & = & 0 \\ & & (2x - 5)(x + 3) & = & 0 \\ & & 2x - 5 = 0 & \text{ or } & x + 3 = 0 \\ & & 2x & = & 5 \\ & & x & = & 2.5 & \text{ or } & x = -3\end{aligned}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{aligned}x & & x(2x + 1) & = & 15 \\2x + 1 & & 2x^2 + x - 15 & = & 0 \\ & & (2x - 5)(x + 3) & = & 0 \\ & & 2x - 5 = 0 \text{ or } x + 3 = 0 & & \\ & & 2x = 5 & & \\ & & x = 2.5 \text{ or } x = -3 & & \\ & & 2x + 1 = & & \end{aligned}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x = 5$$

$$x = 2.5 \text{ or } x = -3$$

$$2x + 1 = 6$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{aligned}x & & x(2x + 1) & = & 15 \\2x + 1 & & 2x^2 + x - 15 & = & 0 \\ & & (2x - 5)(x + 3) & = & 0 \\ & & 2x - 5 = 0 & \text{ or } & x + 3 = 0 \\ & & 2x & = & 5 \\ & & x & = & 2.5 & \text{ or } & x = -3 \\ 2x + 1 & = & 6 & & 2x + 1 & =\end{aligned}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{aligned}x & & x(2x + 1) & = & 15 \\2x + 1 & & 2x^2 + x - 15 & = & 0 \\ & & (2x - 5)(x + 3) & = & 0 \\ & & 2x - 5 = 0 & \text{ or } & x + 3 = 0 \\ & & 2x & = & 5 \\ & & x & = & 2.5 & \text{ or } & x = -3 \\ 2x + 1 & = & 6 & & 2x + 1 & = & -5\end{aligned}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x = 5$$

$$x = 2.5 \text{ or } x = -3$$

$$2x + 1 = 6 \quad 2x + 1 = -5$$

The numbers are 2.5 and 6 or -3 and -5.

Represent all unknowns in terms of the same variable.

Write an Equation.

Solve the equation.

Answer the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

1. One number is one more than two times another. Their product is 15. What are the numbers?

$$\begin{array}{l} x \\ 2x + 1 \end{array}$$

$$x(2x + 1) = 15$$

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

$$(2x - 5)(x + 3) = 0$$

$$2x - 5 = 0 \text{ or } x + 3 = 0$$

$$2x = 5$$

$$x = 2.5 \text{ or } x = -3$$

$$2x + 1 = 6 \quad 2x + 1 = -5$$

The numbers are 2.5 and 6 or -3 and -5.

Represent all unknowns in terms of the same variable.

Write an Equation.

Solve the equation.

Answer the question (complete sentence).

Check your solution.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. **One number is equal to the square of another. Their sum is 20. What are the numbers?**

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. **One number is equal to the square of another. Their sum is 20. What are the numbers?**

x

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. **One number is equal to the square of another. Their sum is 20. What are the numbers?**

x

x^2

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

x

x^2

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

x

x^2

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

x

x^2

Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

x

x

x^2

Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$\begin{array}{l} x \\ x^2 \end{array} \quad x +$$

Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

x

$x + x^2$

x^2

Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

x

$$x + x^2 = 20$$

x^2

Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$\begin{array}{l} x \\ x^2 \end{array} \quad x + x^2 = 20$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$\begin{array}{l} x \\ x^2 \end{array} \quad x + x^2 = 20$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$\begin{array}{l} x \\ x^2 \end{array} \quad \begin{array}{l} x + x^2 = 20 \\ x^2 \end{array}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$\begin{array}{l} x \\ x^2 \end{array} \quad \begin{array}{l} x + x^2 = 20 \\ x^2 + x \end{array}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$\begin{array}{l} x \\ x^2 \end{array} \quad \begin{array}{l} x + x^2 = 20 \\ x^2 + x - 20 = 0 \\ (x \quad)(x \quad) = 0 \end{array}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \text{ or}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \text{ or } x + 5 = 0$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

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2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$\begin{array}{l} x \\ x^2 \end{array} \quad x + x^2 = 20$$

$$x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \text{ or } x + 5 = 0$$

$$x = 4$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \text{ or } x + 5 = 0$$

$$x = 4 \text{ or}$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \text{ or } x + 5 = 0$$

$$x = 4 \text{ or } x = -5$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \text{ or } x + 5 = 0$$

$$x = 4 \text{ or } x = -5$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \quad \text{or} \quad x + 5 = 0$$

$$x = 4 \quad \text{or} \quad x = -5$$

$$x^2 =$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \quad \text{or} \quad x + 5 = 0$$

$$x = 4 \quad \text{or} \quad x = -5$$

$$x^2 = 16$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \quad \text{or} \quad x + 5 = 0$$

$$x = 4 \quad \text{or} \quad x = -5$$

$$x^2 = 16 \quad x^2 =$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \quad \text{or} \quad x + 5 = 0$$

$$x = 4 \quad \text{or} \quad x = -5$$

$$x^2 = 16 \quad x^2 = 25$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

2. One number is equal to the square of another. Their sum is 20. What are the numbers?

$$x \quad x + x^2 = 20$$

$$x^2 \quad x^2 + x - 20 = 0$$

$$(x - 4)(x + 5) = 0$$

$$x - 4 = 0 \quad \text{or} \quad x + 5 = 0$$

$$x = 4 \quad \text{or} \quad x = -5$$

$$x^2 = 16 \quad x^2 = 25$$

**The numbers are 4 and 16
or -5 and 25.**

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

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Represent all unknowns in terms of the same variable.

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Solve the equation.

AnsWER the question (complete sentence).

Check your solution.

Algebra I Class Worksheet #3 Unit 12 RESAC

3. The length of a rectangle is one inch less than twice its width. The area of the rectangle is 36 square inches. What are the dimensions of the rectangle?

Algebra I Class Worksheet #3 Unit 12 RESAC

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Algebra I Class Worksheet #3 Unit 12 RESAC

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Algebra I Class Worksheet #3 Unit 12 RESAC

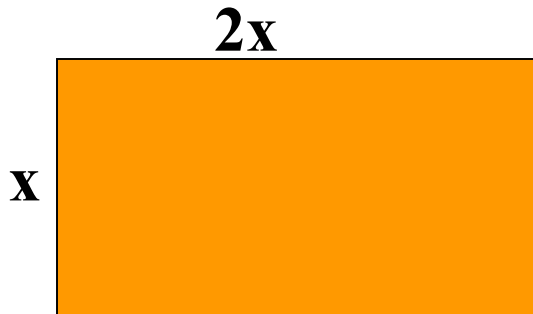
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Algebra I Class Worksheet #3 Unit 12 RESAC

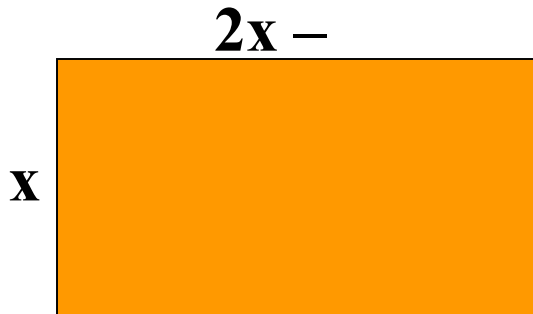
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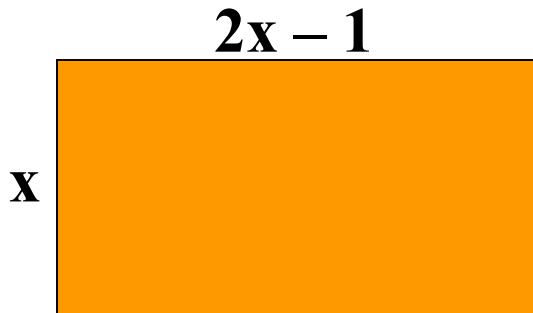
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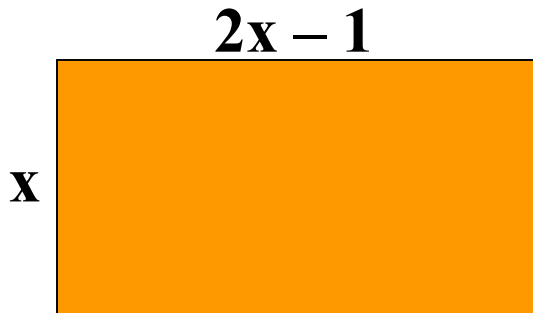
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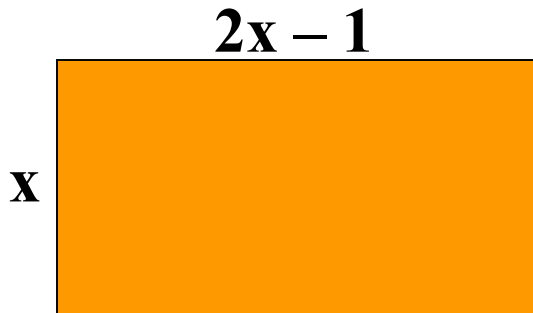
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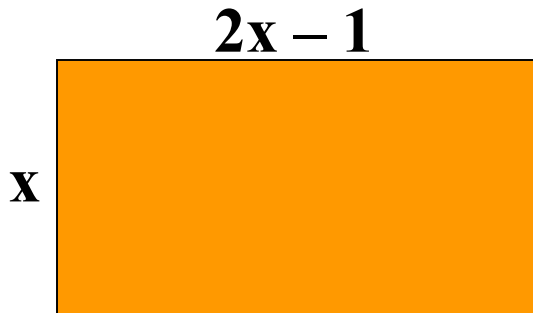


Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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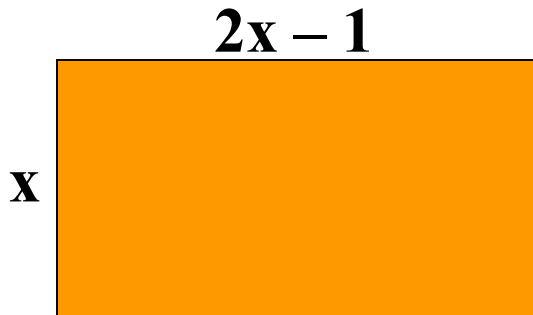


Represent all unknowns in terms of the same variable.

Write an Equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$x($

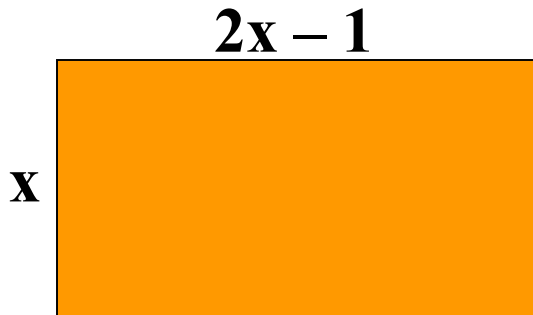
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Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x(2x - 1)$$



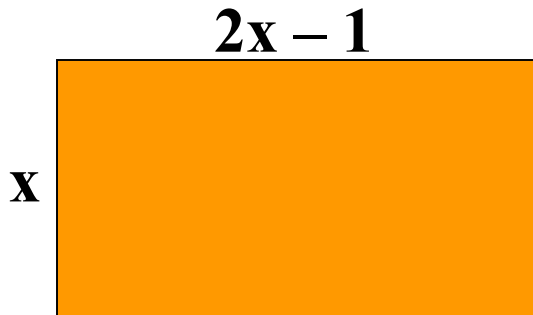
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$$x(2x - 1) = 36$$



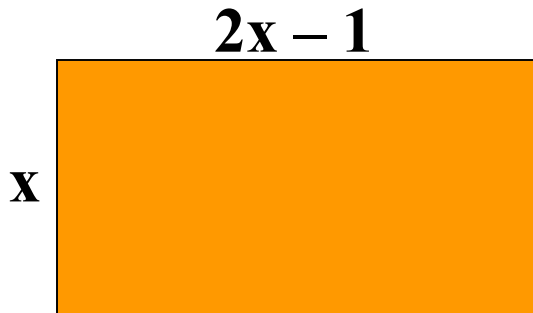
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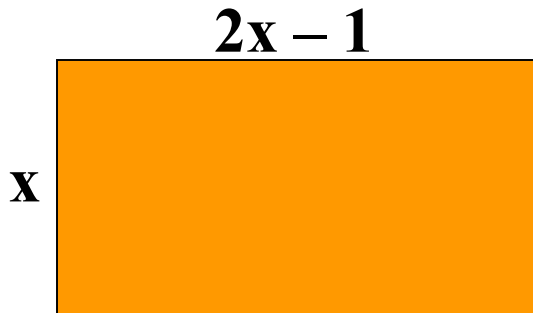
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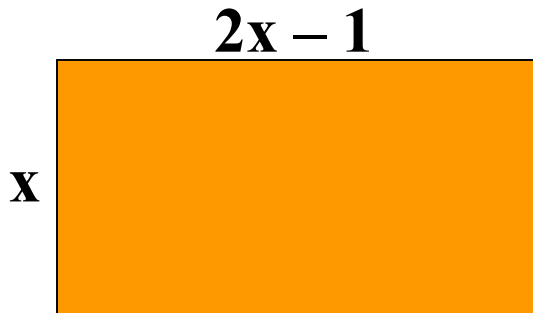
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Solve the equation.

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$$x(2x - 1) = 36$$

$$2x^2$$

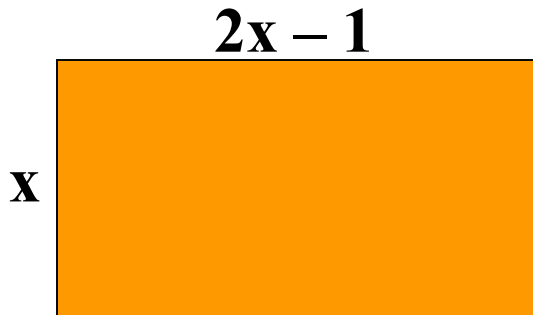
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Write an **E**quation.

Solve the equation.

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$$x(2x - 1) = 36$$

$$2x^2 - x$$

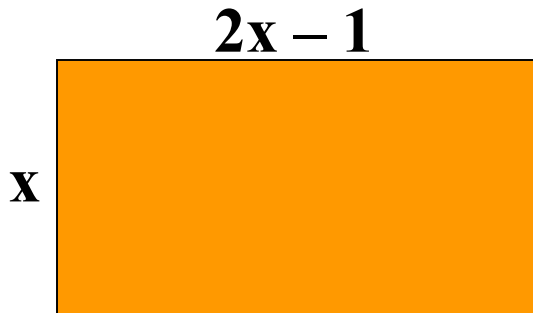
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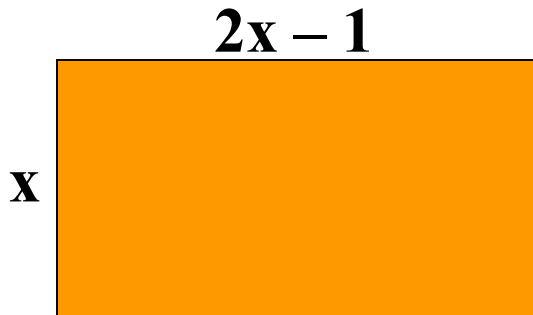
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$$x(2x - 1) = 36$$

$$2x^2 - x - 36 = 0$$

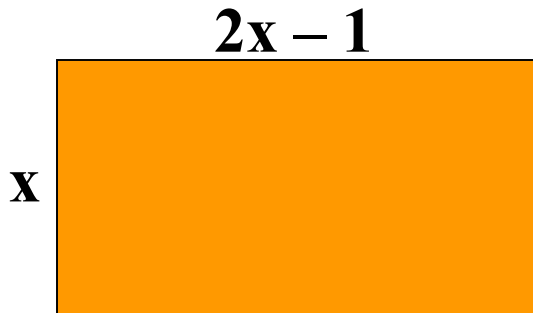
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$$x(2x - 1) = 36$$

$$2x^2 - x - 36 = 0$$

$$(2x \quad)(x \quad) = 0$$

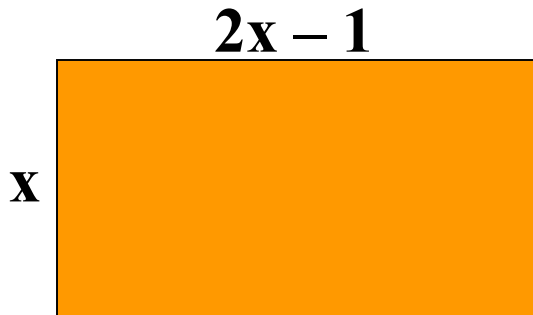
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$$x(2x - 1) = 36$$

$$2x^2 - x - 36 = 0$$

$$(2x - 9)(x + 4) = 0$$

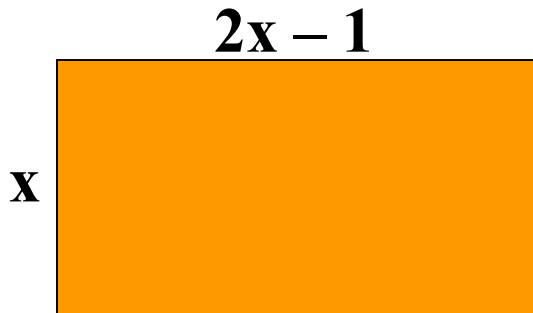
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$$2x - 9 = 0$$

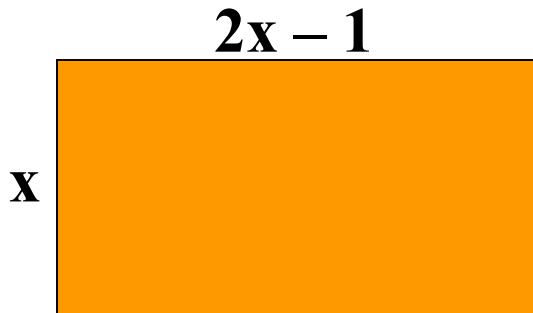
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$$2x - 9 = 0 \text{ or}$$

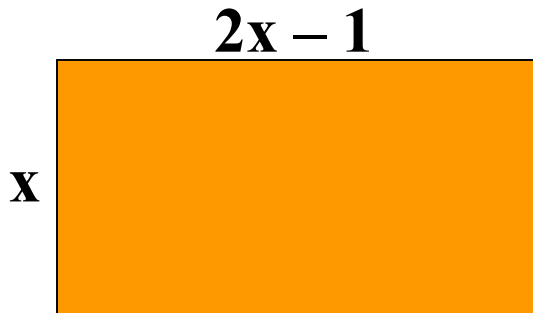
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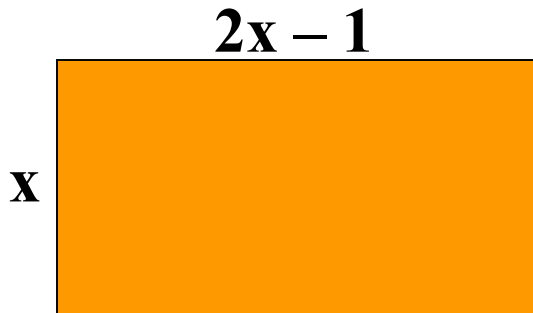
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$$2x =$$

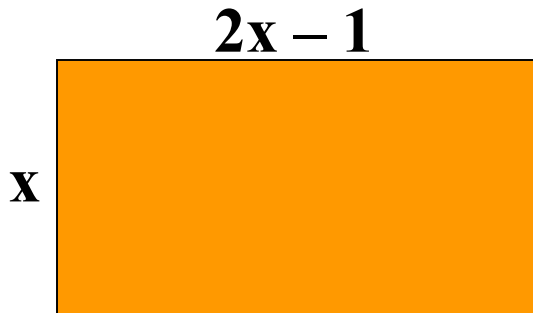
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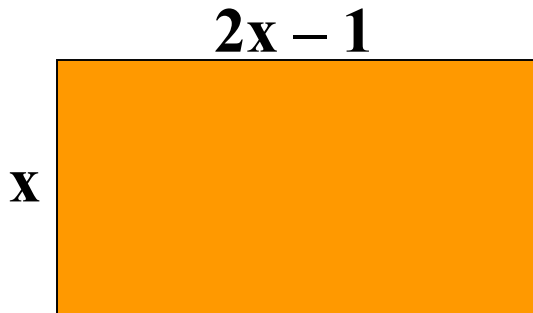
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$$2x^2 - x - 36 = 0$$

$$(2x - 9)(x + 4) = 0$$

$$2x - 9 = 0 \text{ or } x + 4 = 0$$

$$2x = 9$$

$$x =$$

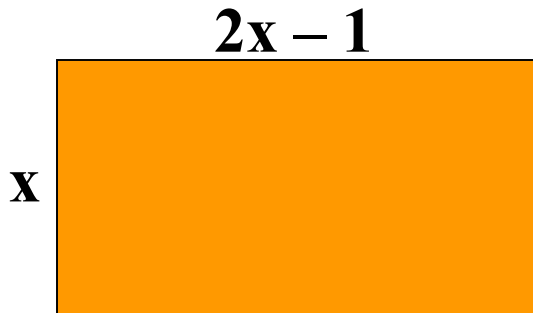
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$$2x^2 - x - 36 = 0$$

$$(2x - 9)(x + 4) = 0$$

$$2x - 9 = 0 \text{ or } x + 4 = 0$$

$$2x = 9$$

$$x = 9/2$$

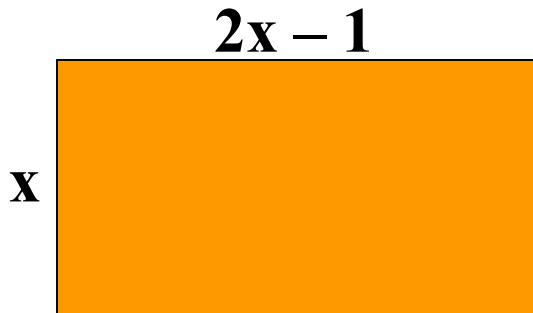
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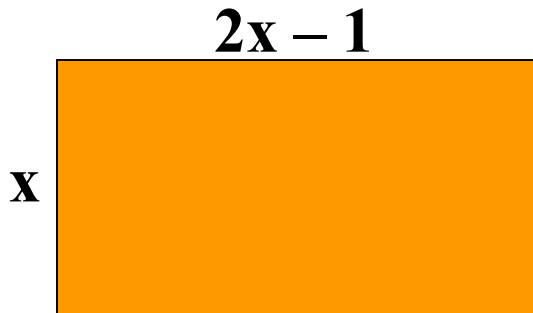
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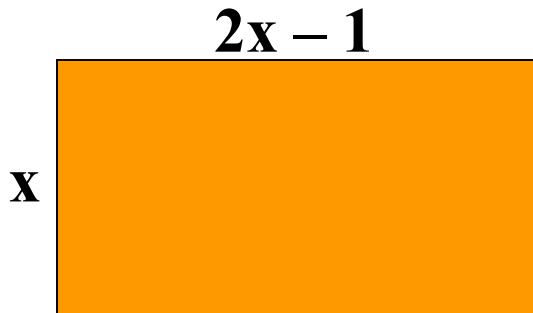
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$$2x - 9 = 0 \quad \text{or} \quad x + 4 = 0$$

$$2x = 9$$

$$x = 9/2 \quad \text{or} \quad x = -4$$

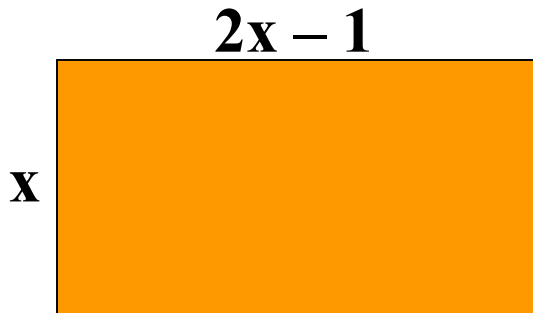
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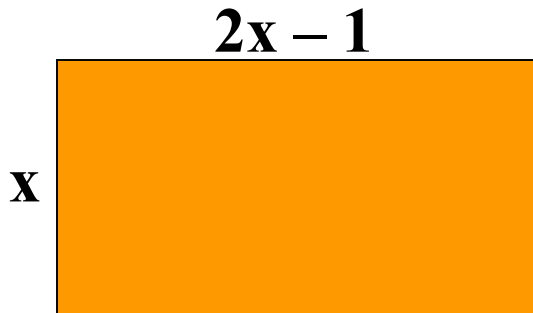
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Solve the equation.

AnsWER the question (complete sentence).

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$$2x^2 - x - 36 = 0$$

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$$2x - 9 = 0 \quad \text{or} \quad x + 4 = 0$$

$$2x = 9$$

$$x = 9/2 \quad \text{or} \quad x = -4$$

Represent all unknowns in terms of the same variable.

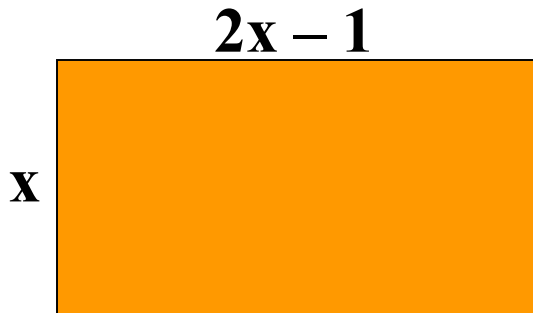
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$$2x^2 - x - 36 = 0$$

$$(2x - 9)(x + 4) = 0$$

$$2x - 9 = 0 \quad \text{or} \quad x + 4 = 0$$

$$2x = 9$$

$$x = 9/2 \quad \text{or} \quad x = -4$$

$$2x - 1 =$$

Represent all unknowns in terms of the same variable.

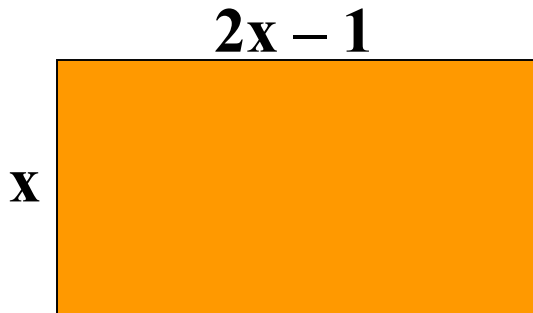
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Solve the equation.

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$$x(2x - 1) = 36$$

$$2x^2 - x - 36 = 0$$

$$(2x - 9)(x + 4) = 0$$

$$2x - 9 = 0 \quad \text{or} \quad x + 4 = 0$$

$$2x = 9$$

$$x = 9/2 \quad \text{or} \quad x = -4$$

$$2x - 1 = 8$$

Represent all unknowns in terms of the same variable.

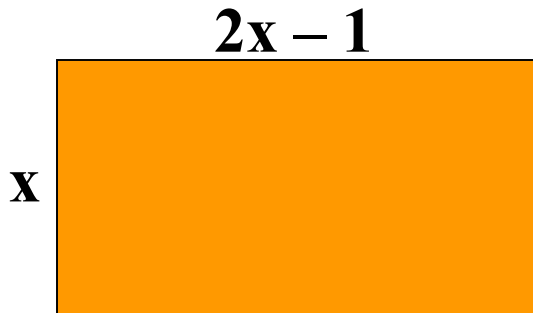
Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

3. The length of a rectangle is one inch less than twice its width. The area of the rectangle is 36 square inches. What are the dimensions of the rectangle?



The rectangle is 8 inches long and 4.5 inches wide.

$$x(2x - 1) = 36$$

$$2x^2 - x - 36 = 0$$

$$(2x - 9)(x + 4) = 0$$

$$2x - 9 = 0 \text{ or } x + 4 = 0$$

$$2x = 9$$

$$x = 9/2 \text{ or } x = -4$$

$$2x - 1 = 8$$

Represent all unknowns in terms of the same variable.

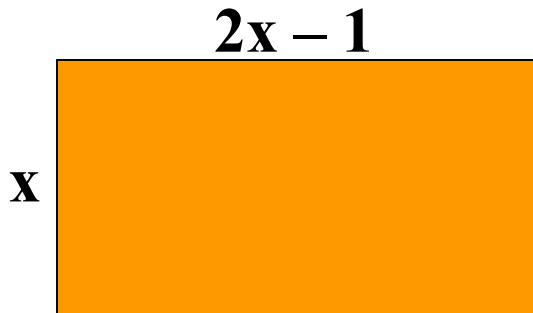
Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

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3. The length of a rectangle is one inch less than twice its width. The area of the rectangle is 36 square inches. What are the dimensions of the rectangle?



The rectangle is 8 inches long and 4.5 inches wide.

$$x(2x - 1) = 36$$

$$2x^2 - x - 36 = 0$$

$$(2x - 9)(x + 4) = 0$$

$$2x - 9 = 0 \text{ or } x + 4 = 0$$

$$2x = 9$$

$$x = 9/2 \text{ or } x = -4$$

$$2x - 1 = 8$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Check your solution.

Algebra I Class Worksheet #3 Unit 12 RESAC

4. The length of the hypotenuse of a right triangle is 3 inches more than twice the length of the shorter leg. The longer leg is 7 inches longer than the shorter leg. Find the length of each side.

Algebra I Class Worksheet #3 Unit 12 RESAC

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Represent all unknowns in terms of the same variable.

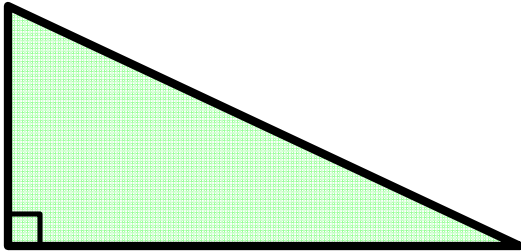
Algebra I Class Worksheet #3 Unit 12 RESAC

4. **The length of the hypotenuse of a right triangle is 3 inches more than twice the length of the shorter leg. The longer leg is 7 inches longer than the shorter leg. Find the length of each side.**

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

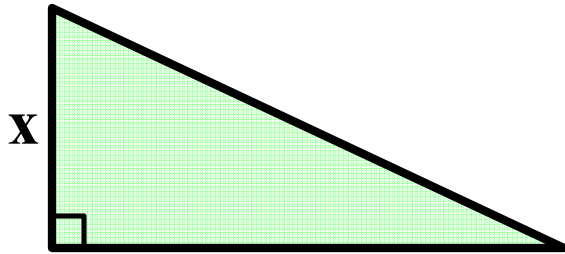
4. **The length of the hypotenuse of a right triangle is 3 inches more than twice the length of the shorter leg.** The longer leg is 7 inches longer than the shorter leg. Find the length of each side.



Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

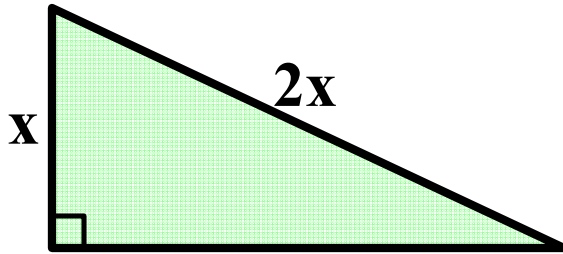
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Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

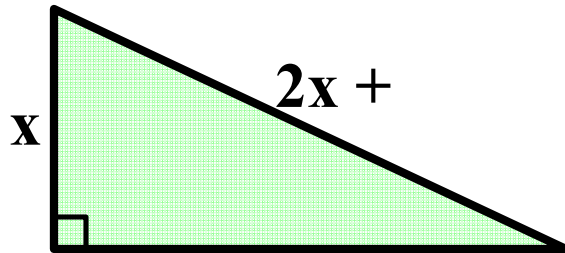
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Algebra I Class Worksheet #3 Unit 12 RESAC

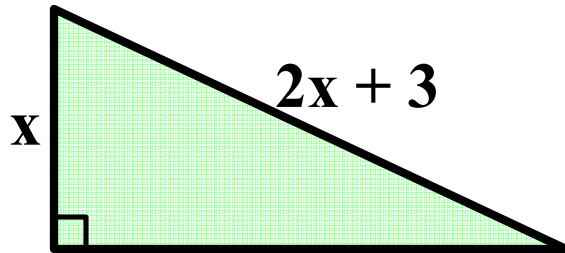
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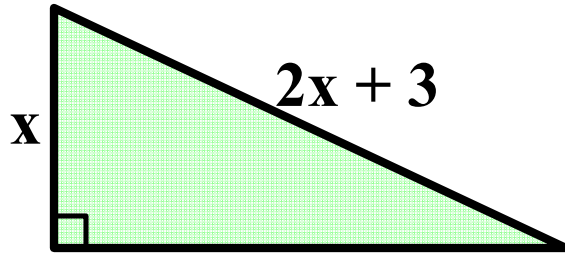
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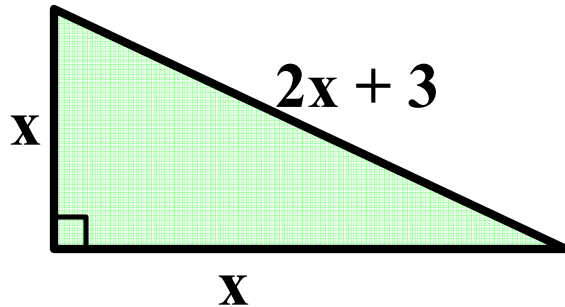
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Algebra I Class Worksheet #3 Unit 12 RESAC

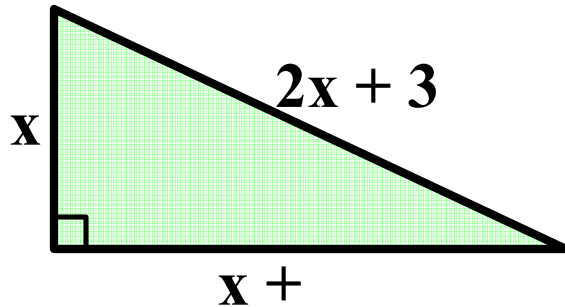
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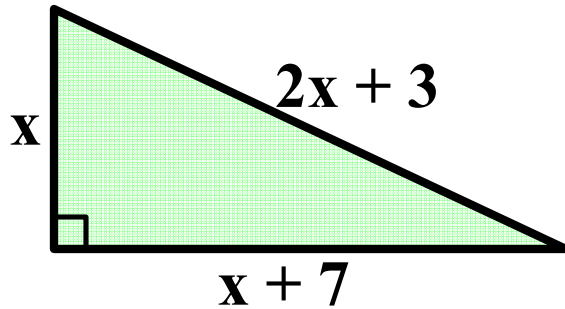
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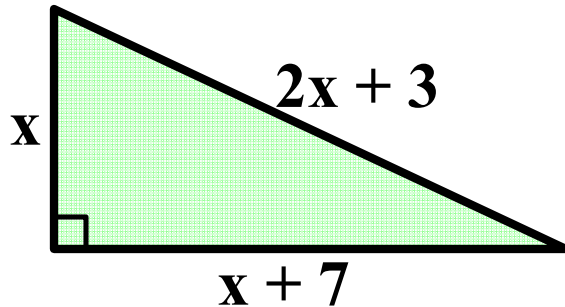
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Algebra I Class Worksheet #3 Unit 12 RESAC

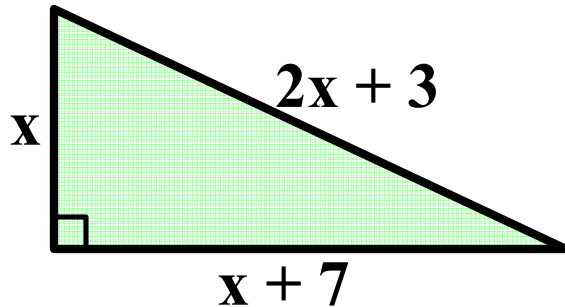
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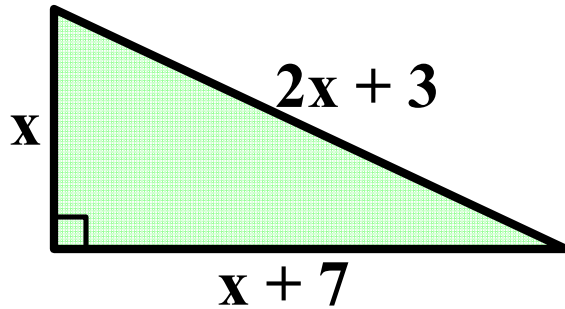


Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

4. The length of the hypotenuse of a right triangle is 3 inches more than twice the length of the shorter leg. The longer leg is 7 inches longer than the shorter leg. Find the length of each side.



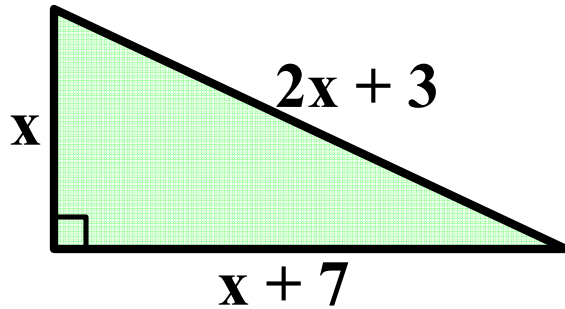
x^2

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

4. The length of the hypotenuse of a right triangle is 3 inches more than twice the length of the shorter leg. The longer leg is 7 inches longer than the shorter leg. Find the length of each side.



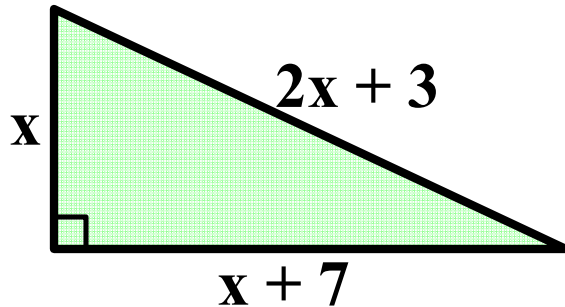
$$x^2 +$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

4. The length of the hypotenuse of a right triangle is 3 inches more than twice the length of the shorter leg. The longer leg is 7 inches longer than the shorter leg. Find the length of each side.



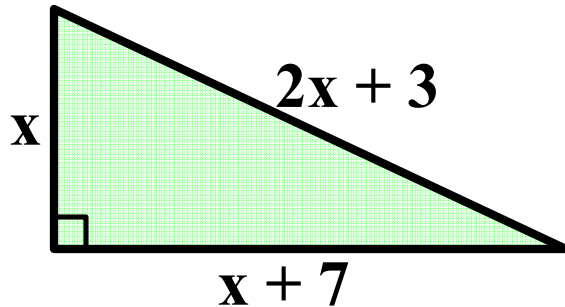
$$x^2 + (x + 7)^2$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

4. The length of the hypotenuse of a right triangle is 3 inches more than twice the length of the shorter leg. The longer leg is 7 inches longer than the shorter leg. Find the length of each side.



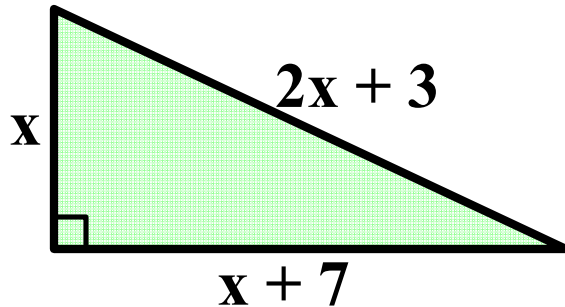
$$x^2 + (x + 7)^2 =$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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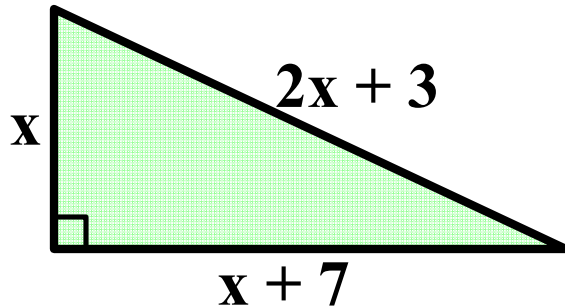
$$x^2 + (x + 7)^2 = (2x + 3)^2$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

4. The length of the hypotenuse of a right triangle is 3 inches more than twice the length of the shorter leg. The longer leg is 7 inches longer than the shorter leg. Find the length of each side.



$$x^2 + (x + 7)^2 = (2x + 3)^2$$

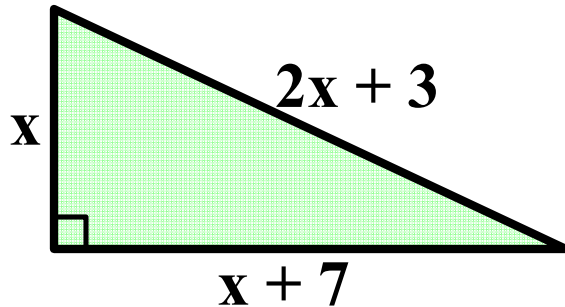
I applied the Pythagorean Theorem.

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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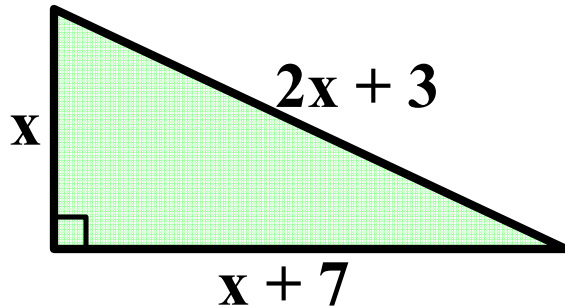
$$x^2 + (x + 7)^2 = (2x + 3)^2$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

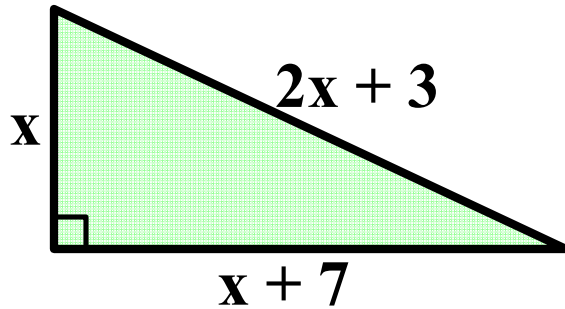
Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

x^2

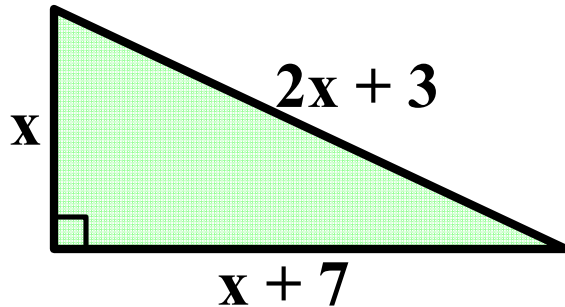
Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$
$$x^2 +$$

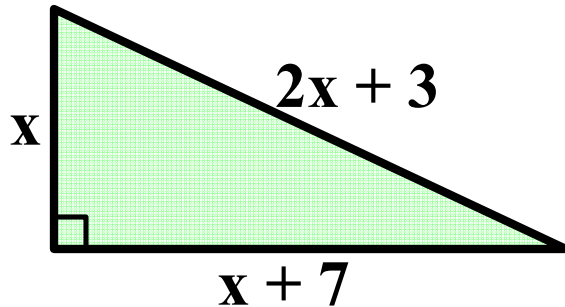
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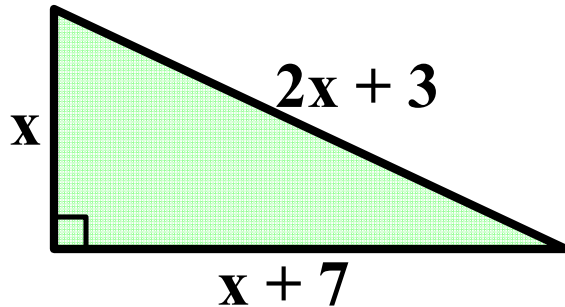
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$$x^2 + (x + 7)^2 = (2x + 3)^2$$
$$x^2 + x^2$$

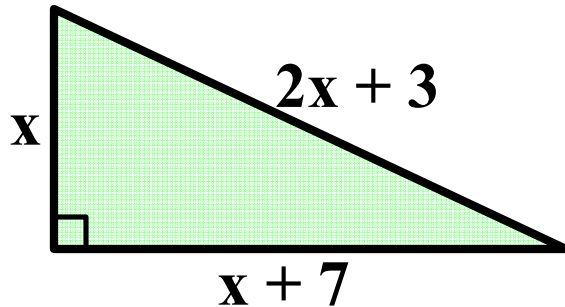
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$$x^2 + (x + 7)^2 = (2x + 3)^2$$
$$x^2 + x^2 + 14x$$

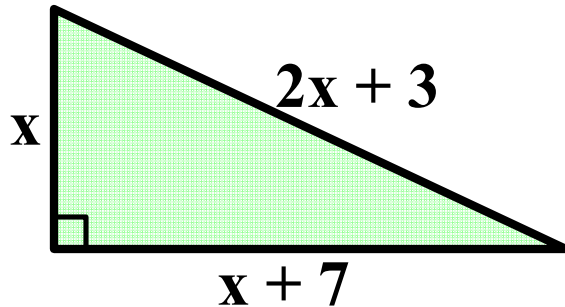
Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$
$$x^2 + x^2 + 14x + 49$$

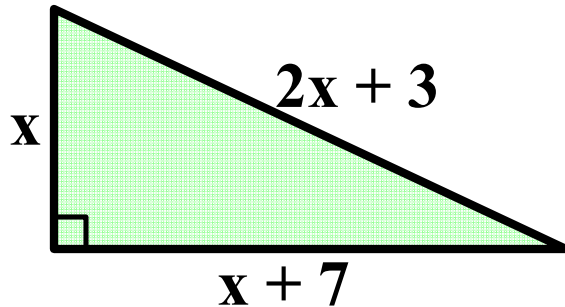
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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

$$x^2 + x^2 + 14x + 49$$

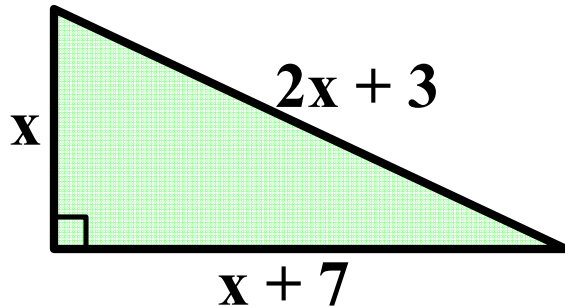
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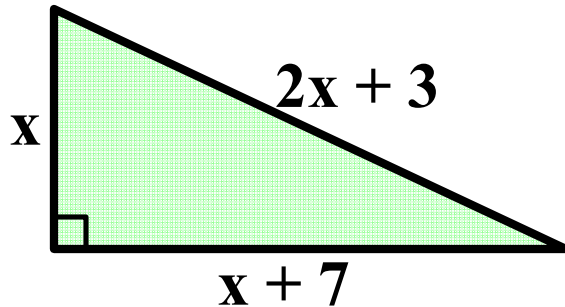
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$$x^2 + x^2 + 14x + 49 =$$

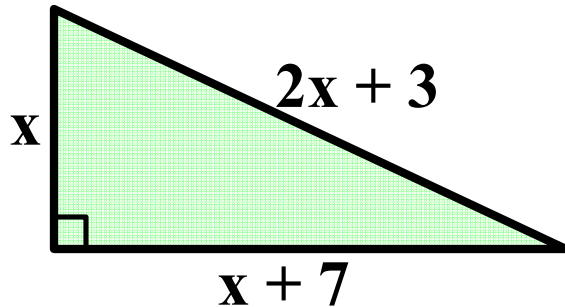
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Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

$$x^2 + x^2 + 14x + 49 = 4x^2$$

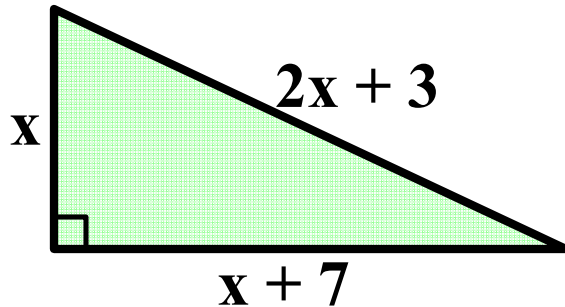
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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

$$x^2 + x^2 + 14x + 49 = 4x^2 + 12x$$

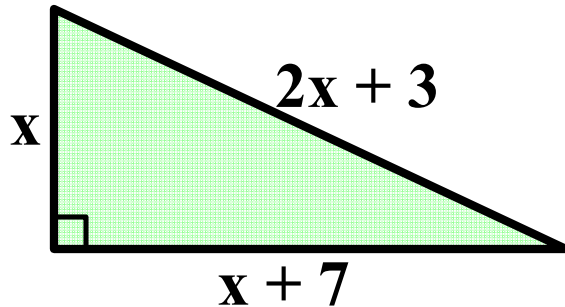
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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

$$x^2 + x^2 + 14x + 49 = 4x^2 + 12x + 9$$

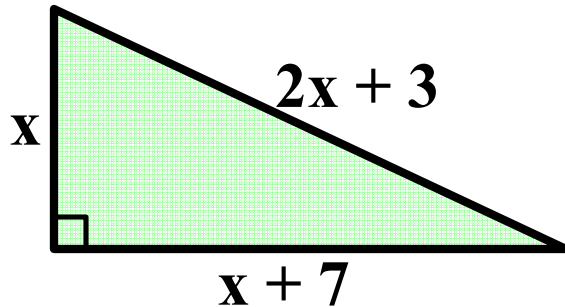
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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

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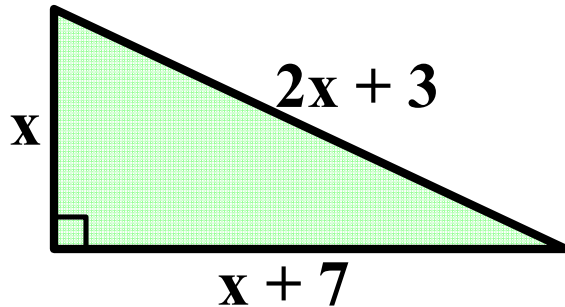
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$$x^2 + x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$2x^2$$

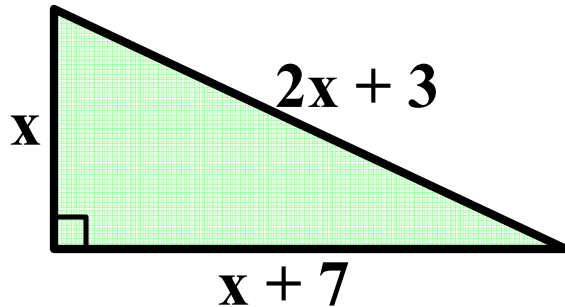
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$$2x^2 + 14x + 49$$

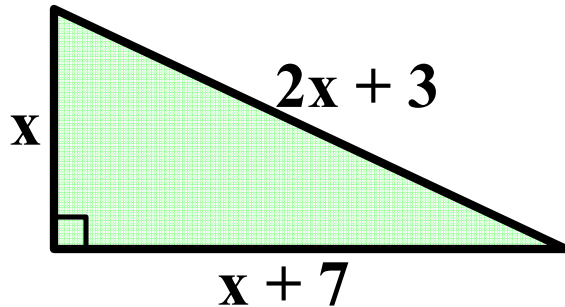
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$$2x^2 + 14x + 49 = 4x^2 + 12x + 9$$

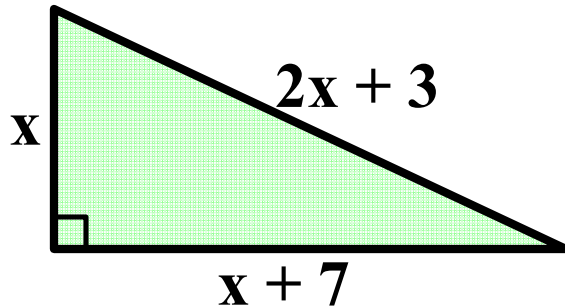
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Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

$$x^2 + x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$2x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$0 =$$

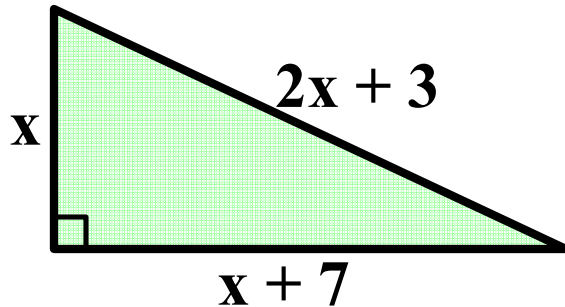
Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

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$$2x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$0 = 2x^2$$

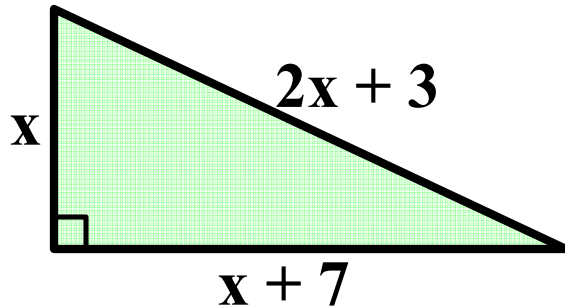
Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

$$x^2 + x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$2x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$0 = 2x^2 - 2x$$

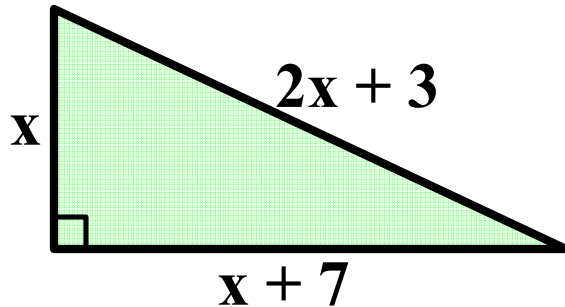
Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

$$x^2 + x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$2x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$0 = 2x^2 - 2x - 40$$

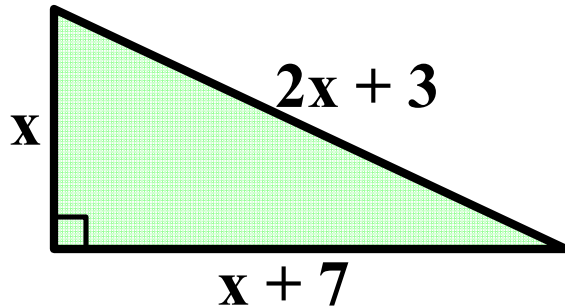
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Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

$$x^2 + x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$2x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$0 = 2x^2 - 2x - 40$$

$$0 =$$

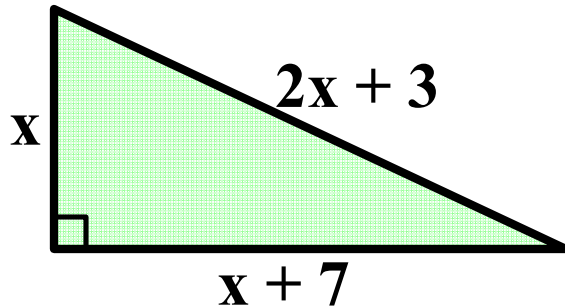
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Write an **E**quation.

Solve the equation.

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$$x^2 + (x + 7)^2 = (2x + 3)^2$$

$$x^2 + x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$2x^2 + 14x + 49 = 4x^2 + 12x + 9$$

$$0 = 2x^2 - 2x - 40$$

$$0 = x^2$$

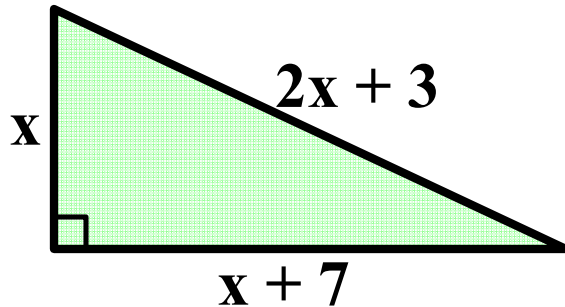
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Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$0 = 2x^2 - 2x - 40$$

$$0 = x^2 - x$$

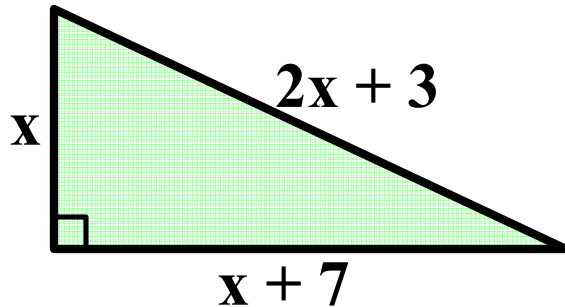
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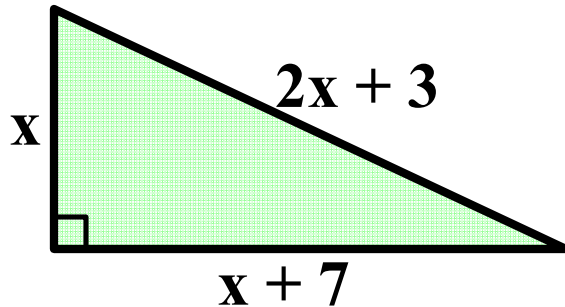
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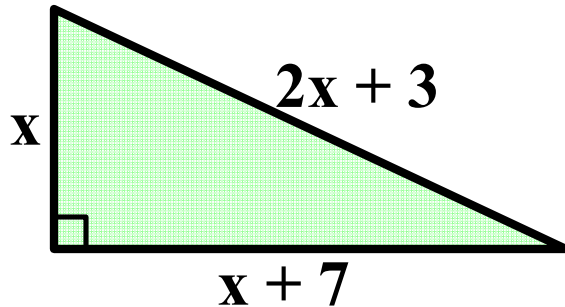
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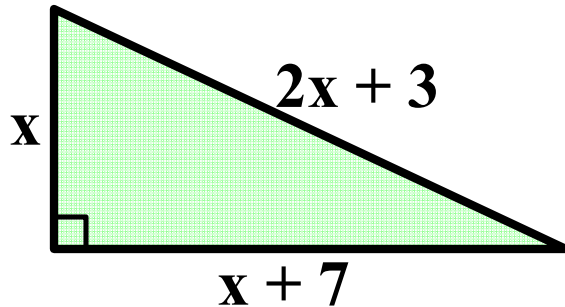
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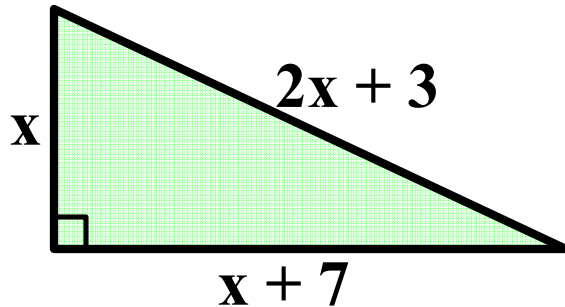
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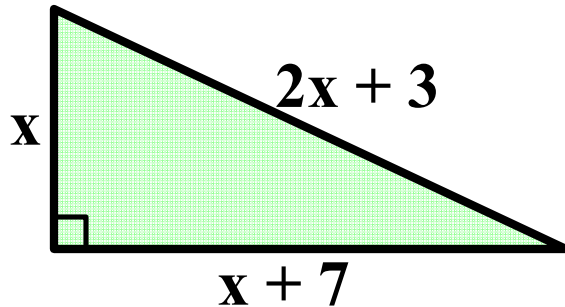
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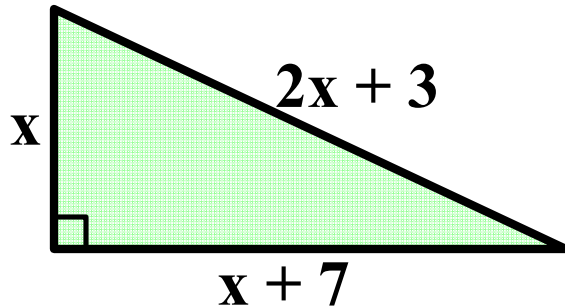
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$$x =$$

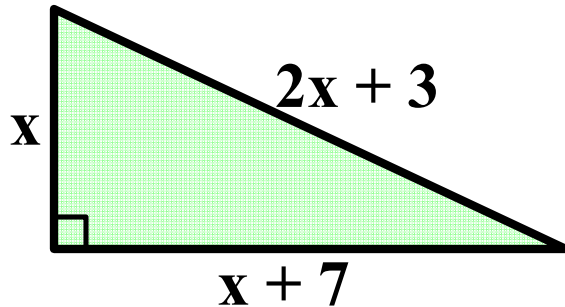
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$$x = -4$$

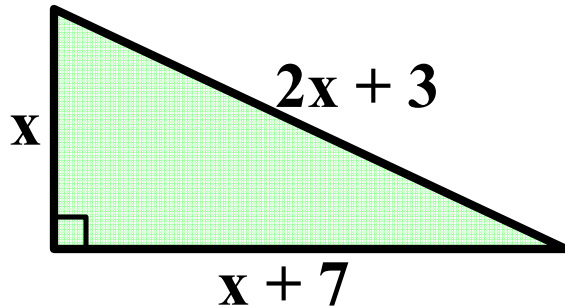
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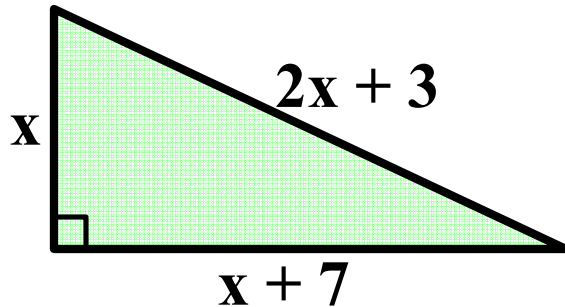
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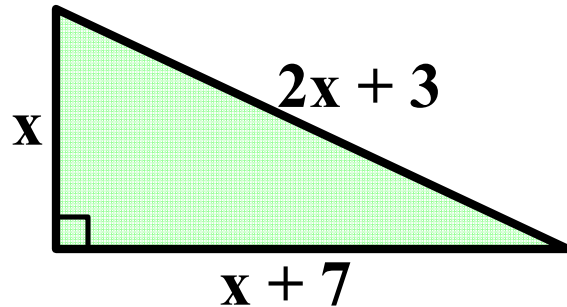
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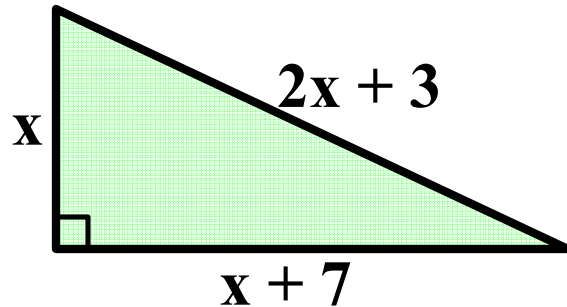
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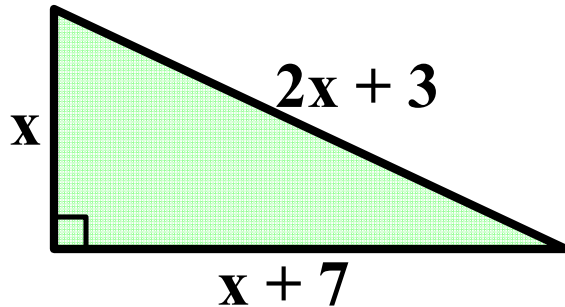
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AnsWER the question (complete sentence).

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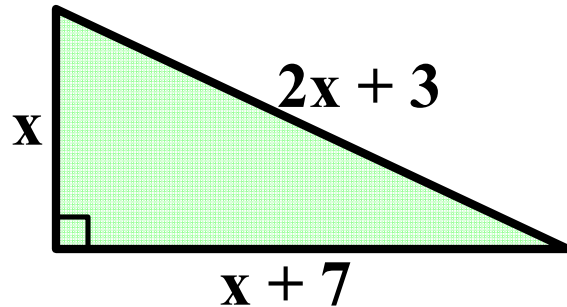
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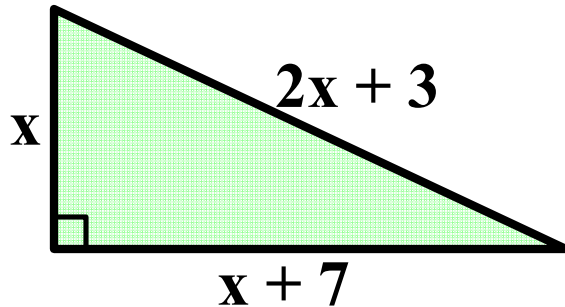
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$$x + 4 = 0 \text{ or } x - 5 = 0$$

$$\cancel{x = -4} \text{ or } x = 5$$

$$x + 7 = 12$$

Represent all unknowns in terms of the same variable.

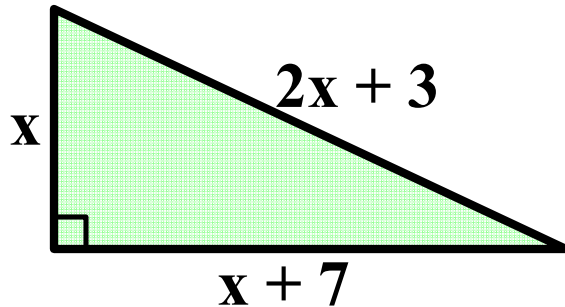
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Solve the equation.

AnsWER the question (complete sentence).

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~~$$x = -4 \text{ or } x = 5$$~~

$$x + 7 = 12$$

$$2x + 3 =$$

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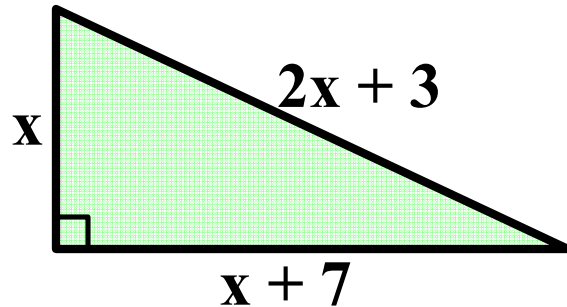
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Solve the equation.

AnsWER the question (complete sentence).

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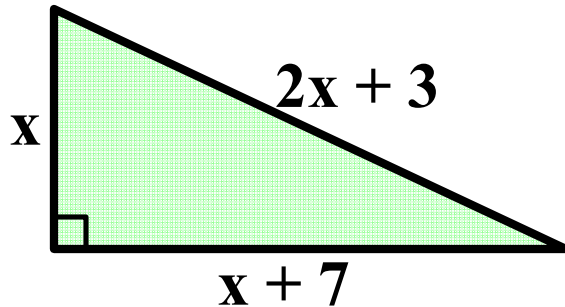
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The sides measure 5 inches, 12 inches, and 13 inches.

Represent all unknowns in terms of the same variable.

Write an Equation.

Solve the equation.

Answer the question (complete sentence).

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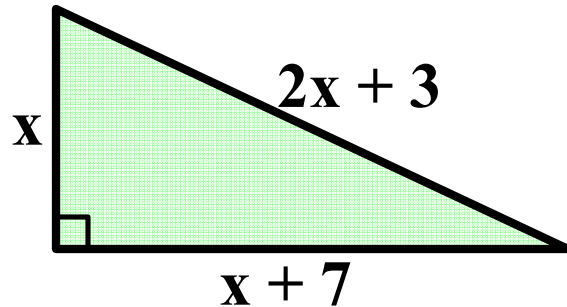
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Write an Equation.

Solve the equation.

Answer the question (complete sentence).

Check your solution.

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Algebra I Class Worksheet #3 Unit 12 RESAC

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Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find **two consecutive odd integers** whose product is one less than three times their sum.

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

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x

Represent all unknowns in terms of the same variable.

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Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

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x

$x +$

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find **two consecutive odd integers** whose product is one less than three times their sum.

$$\begin{array}{c} x \\ x + 2 \end{array}$$

Represent all unknowns in terms of the same variable.

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$x + 2$

Product:

Represent all unknowns in terms of the same variable.

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Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find two consecutive odd integers whose **product** is one less than three times their sum.

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$x + 2$

Product: $x($

Represent all unknowns in terms of the same variable.

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Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find two consecutive odd integers whose **product** is one less than three times their sum.

x

$x + 2$

Product: $x(x + 2)$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find two consecutive odd integers whose **product** is one less than three times their sum.

x

$x + 2$

Product: $x(x + 2) =$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find two consecutive odd integers whose **product** is one less than three times their sum.

x

$x + 2$

Product: $x(x + 2) = x^2$

Represent all unknowns in terms of the same variable.

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$x + 2$

Product: $x(x + 2) = x^2 +$

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Product: $x(x + 2) = x^2 + 2x$

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Product: $x(x + 2) = x^2 + 2x$

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$x + 2$

Product: $x(x + 2) = x^2 + 2x$

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Sum:

Represent all unknowns in terms of the same variable.

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Algebra I Class Worksheet #3 Unit 12 RESAC

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$$\begin{array}{c} x \\ x + 2 \end{array}$$

Product: $x(x + 2) = x^2 + 2x$

Sum: $x + (x + 2)$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find two consecutive odd integers whose product is one less than three times their sum.

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Algebra I Class Worksheet #3 Unit 12 RESAC

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$$\begin{array}{c} x \\ x + 2 \end{array}$$

$$x^2 + 2x$$

Product: $x(x + 2) = x^2 + 2x$

Sum: $x + (x + 2) = 2x + 2$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

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$$\begin{array}{c} x \\ x + 2 \end{array}$$

$$x^2 + 2x =$$

Product: $x(x + 2) = x^2 + 2x$

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Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find two consecutive odd integers whose product is one less than three times their sum.

$$\begin{array}{c} x \\ x + 2 \end{array}$$

$$x^2 + 2x = 3(x + 2) - 1$$

Product: $x(x + 2) = x^2 + 2x$

Sum: $x + (x + 2) = 2x + 2$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find two consecutive odd integers whose **product** is one less than three times their sum.

$$\begin{array}{c} x \\ x + 2 \end{array}$$

$$x^2 + 2x = 3(2x + 2)$$

Product: $x(x + 2) = x^2 + 2x$

Sum: $x + (x + 2) = 2x + 2$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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Solve the equation.

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$$x^2 + 2x = 3(2x + 2) - 1$$

$$x^2 + 2x =$$

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Sum: $x + (x + 2) = 2x + 2$

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Algebra I Class Worksheet #3 Unit 12 RESAC

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$$\begin{array}{c} x \\ x + 2 \end{array}$$

$$x^2 + 2x = 3(2x + 2) - 1$$

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

Product: $x(x + 2) = x^2 + 2x$

Sum: $x + (x + 2) = 2x + 2$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find two consecutive odd integers whose product is one less than three times their sum.

$$\begin{array}{c} x \\ x + 2 \end{array}$$

$$x^2 + 2x = 3(2x + 2) - 1$$

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

Product: $x(x + 2) = x^2 + 2x$

Sum: $x + (x + 2) = 2x + 2$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$\begin{array}{c} x \\ x + 2 \end{array}$$

$$x^2 + 2x = 3(2x + 2) - 1$$

$$x^2 + 2x = 6x + 6 - 1$$

Product: $x(x + 2) = x^2 + 2x$

Sum: $x + (x + 2) = 2x + 2$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

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$$x^2 + 2x = 3(2x + 2) - 1$$

$$x^2 + 2x = 6x + 6 - 1$$

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

Represent all unknowns in terms of the same variable.

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Product: $x(x + 2) = x^2 + 2x$

Sum: $x + (x + 2) = 2x + 2$

$$x^2 + 2x = 3(2x + 2) - 1$$

$$x^2 + 2x = 6x + 6 - 1$$

$$x^2 + 2x = 6x + 5$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

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$$x^2$$

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$$x^2 + 2x = 3(2x + 2) - 1$$

$$x^2 + 2x = 6x + 6 - 1$$

$$x^2 + 2x = 6x + 5$$

$$x^2 - 4x$$

Represent all unknowns in terms of the same variable.

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$$x^2 + 2x = 3(2x + 2) - 1$$

$$x^2 + 2x = 6x + 6 - 1$$

$$x^2 + 2x = 6x + 5$$

$$x^2 - 4x - 5 = 0$$

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$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

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$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \text{ or } x + 1 = 0$$

$$x =$$

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$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \text{ or } x + 1 = 0$$

$$x = 5$$

Represent all unknowns in terms of the same variable.

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$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \text{ or } x + 1 = 0$$

$$x = 5 \text{ or}$$

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$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \text{ or } x + 1 = 0$$

$$x = 5 \text{ or } x =$$

Represent all unknowns in terms of the same variable.

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$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \text{ or } x + 1 = 0$$

$$x = 5 \text{ or } x = -1$$

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Solve the equation.

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$$x^2 + 2x = 6x + 5$$

$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \text{ or } x + 1 = 0$$

$$x = 5 \text{ or } x = -1$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$x^2 + 2x = 3(2x + 2) - 1$$

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$$x^2 + 2x = 6x + 5$$

$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \quad \text{or} \quad x + 1 = 0$$

$$x = 5 \quad \text{or} \quad x = -1$$

$$x + 2 =$$

Represent all unknowns in terms of the same variable.

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Solve the equation.

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$$x^2 + 2x = 3(2x + 2) - 1$$

$$x^2 + 2x = 6x + 6 - 1$$

$$x^2 + 2x = 6x + 5$$

$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \quad \text{or} \quad x + 1 = 0$$

$$x = 5 \quad \text{or} \quad x = -1$$

$$x + 2 = 7$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

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$$\begin{array}{c} x \\ x + 2 \end{array}$$

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$$x^2 + 2x = 3(2x + 2) - 1$$

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$$x^2 + 2x = 6x + 5$$

$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \quad \text{or} \quad x + 1 = 0$$

$$x = 5 \quad \text{or} \quad x = -1$$

$$x + 2 = 7 \quad x + 2 =$$

Represent all unknowns in terms of the same variable.

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Solve the equation.

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$$x^2 + 2x = 6x + 5$$

$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \quad \text{or} \quad x + 1 = 0$$

$$x = 5 \quad \text{or} \quad x = -1$$

$$x + 2 = 7 \quad x + 2 = 1$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Algebra I Class Worksheet #3 Unit 12 RESAC

5. Find two consecutive odd integers whose product is one less than three times their sum.

$$\begin{array}{c} x \\ x + 2 \end{array}$$

Product: $x(x + 2) = x^2 + 2x$

Sum: $x + (x + 2) = 2x + 2$

**The numbers are 5 and 7
or -1 and 1.**

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

$$x^2 + 2x = 3(2x + 2) - 1$$

$$x^2 + 2x = 6x + 6 - 1$$

$$x^2 + 2x = 6x + 5$$

$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \quad \text{or} \quad x + 1 = 0$$

$$x = 5 \quad \text{or} \quad x = -1$$

$$x + 2 = 7 \quad \quad x + 2 = 1$$

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$$x^2 + 2x = 3(2x + 2) - 1$$

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$$x^2 - 4x - 5 = 0$$

$$(x - 5)(x + 1) = 0$$

$$x - 5 = 0 \quad \text{or} \quad x + 1 = 0$$

$$x = 5 \quad \text{or} \quad x = -1$$

$$x + 2 = 7 \quad \quad x + 2 = 1$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Solve the equation.

AnsWER the question (complete sentence).

Check your solution.

Algebra I Class Worksheet #3 Unit 12 RESAC

6. A rectangular garden 30 feet long and 20 feet wide is surrounded by a rock path of uniform width. If the area of the path is 336 square feet, then what is its width?

Algebra I Class Worksheet #3 Unit 12 RESAC

6. A rectangular garden 30 feet long and 20 feet wide is surrounded by a rock path of uniform width. If the area of the path is 336 square feet, then what is its width?

Represent all unknowns in terms of the same variable.

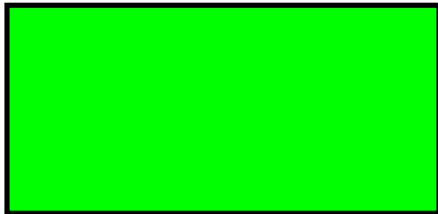
Algebra I Class Worksheet #3 Unit 12 RESAC

6. **A rectangular garden 30 feet long and 20 feet wide is surrounded by a rock path of uniform width. If the area of the path is 336 square feet, then what is its width?**

Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

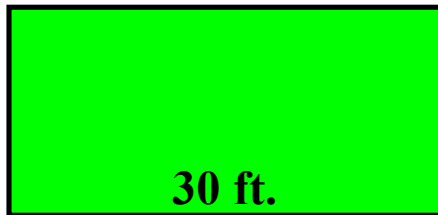
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Represent all unknowns in terms of the same variable.

Algebra I Class Worksheet #3 Unit 12 RESAC

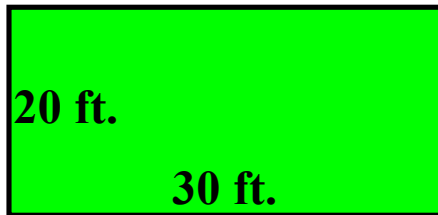
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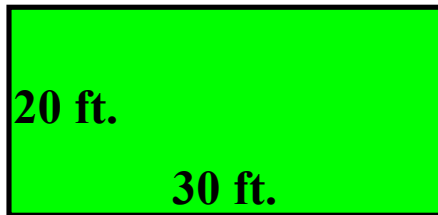
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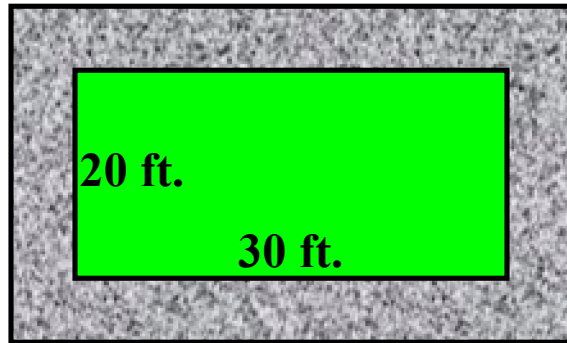
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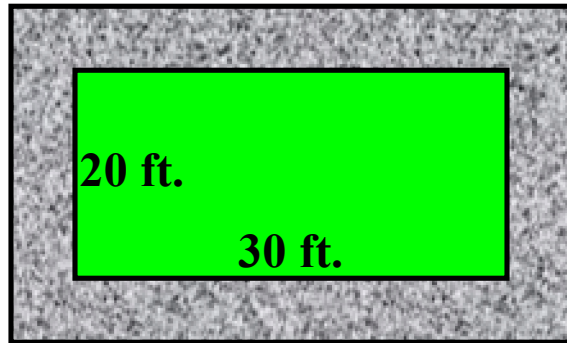
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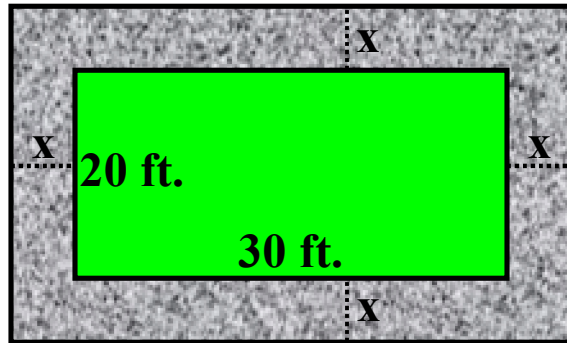
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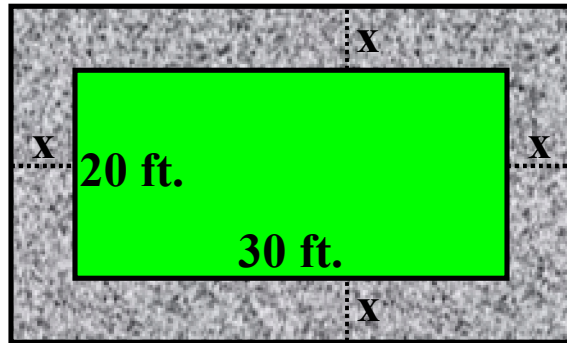
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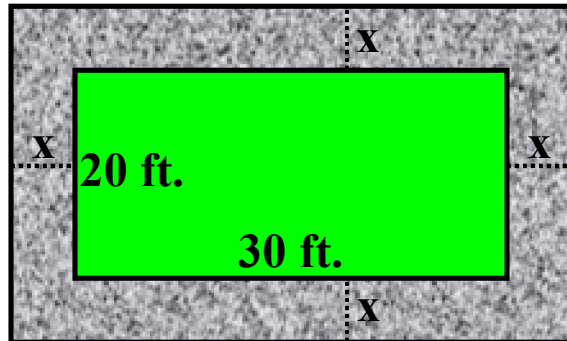
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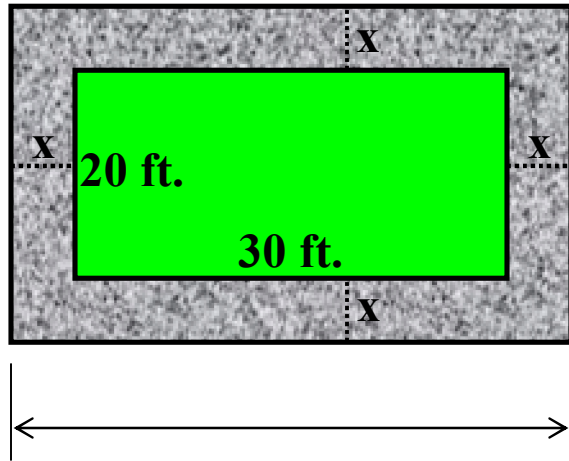


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Write an **E**quation.

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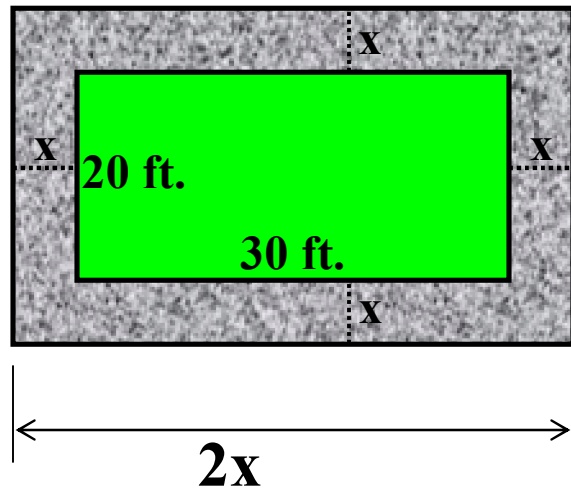


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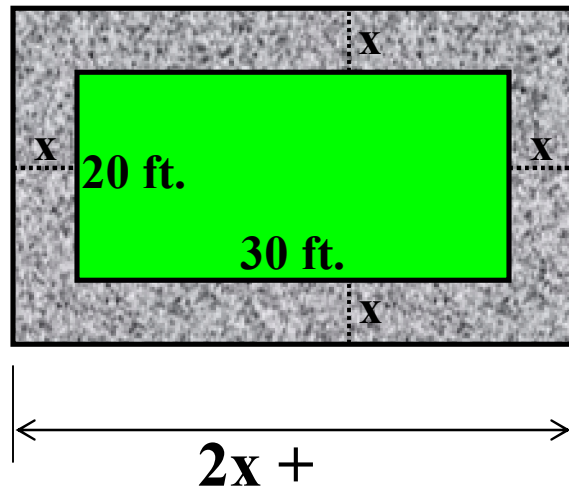


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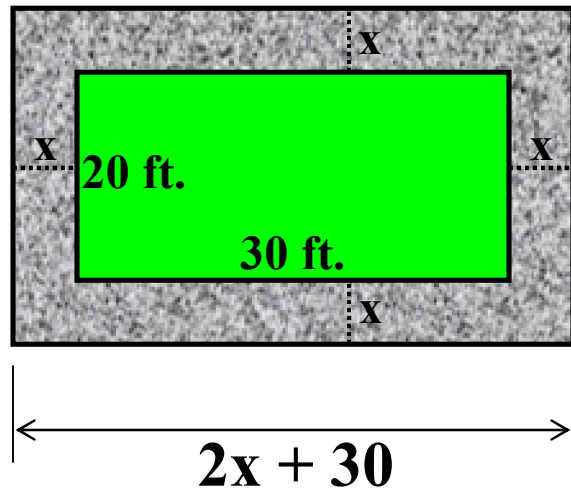


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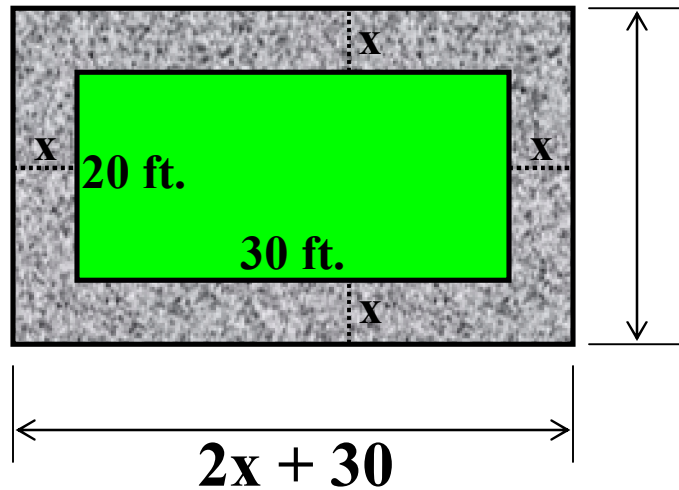


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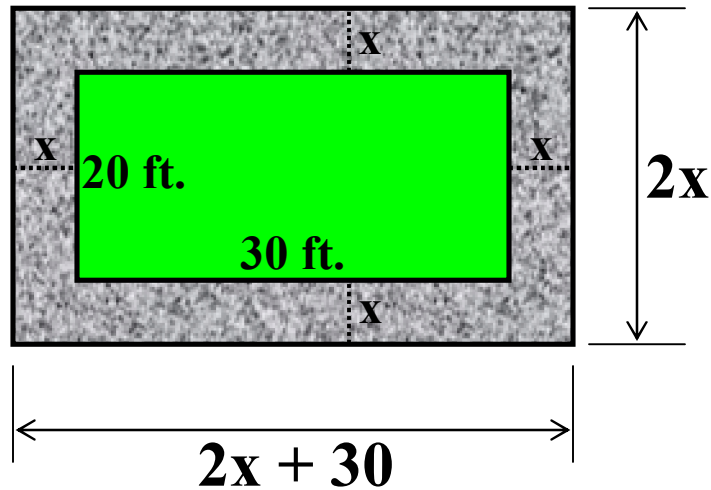


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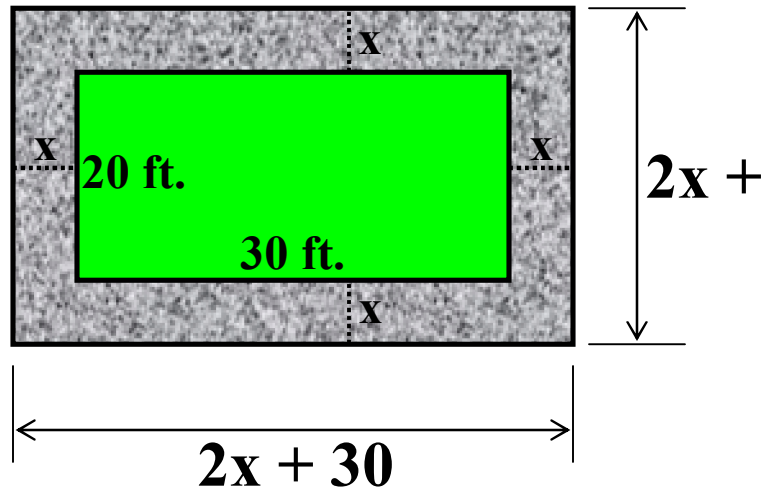


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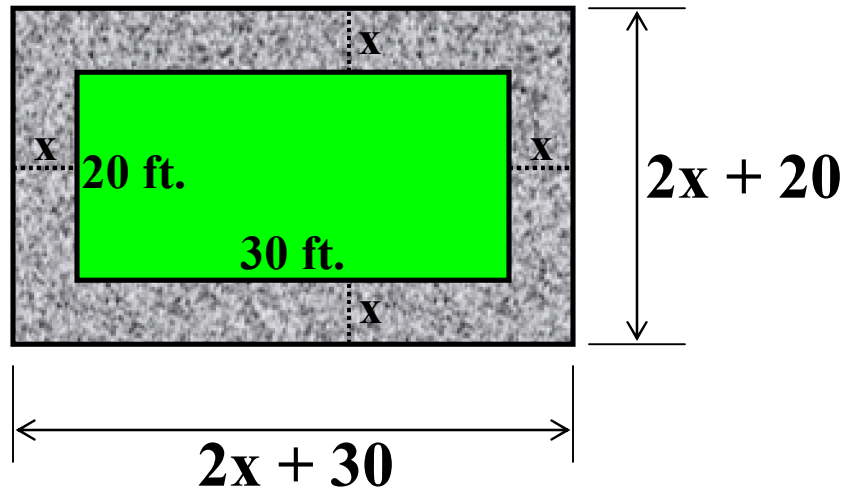


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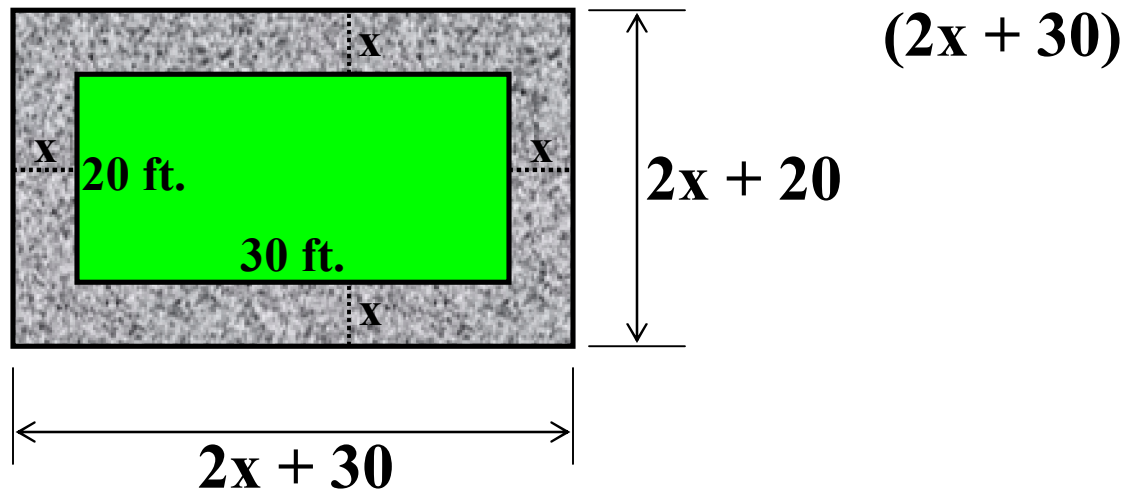


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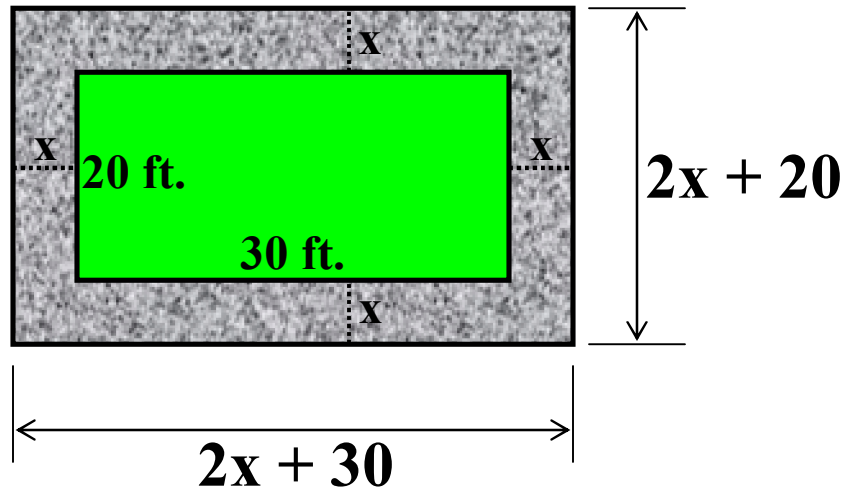


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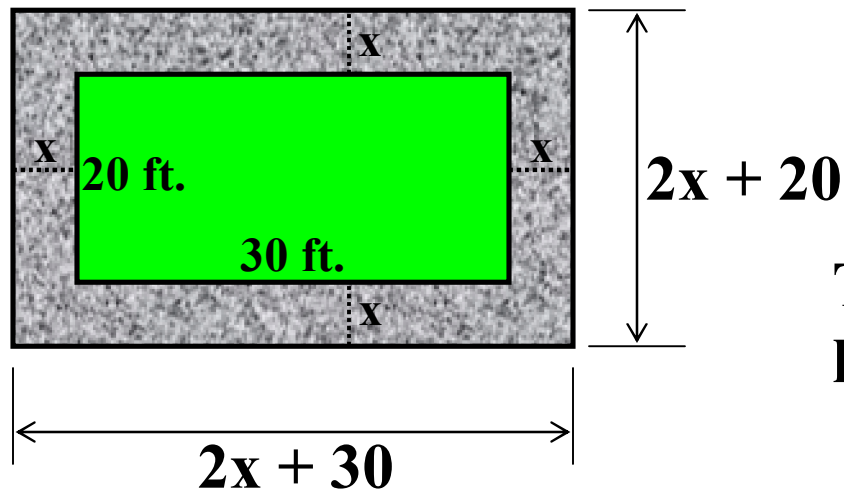
$$(2x + 30)(2x + 20)$$

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

6. A rectangular garden 30 feet long and 20 feet wide is surrounded by a rock path of uniform width. If the area of the path is 336 square feet, then what is its width?



$$(2x + 30)(2x + 20) =$$

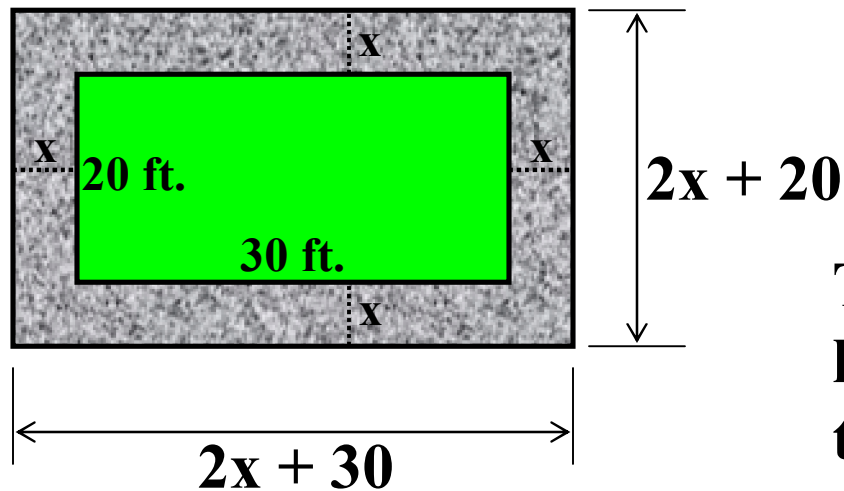
This represents the area of the larger rectangle.

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

6. A rectangular garden 30 feet long and 20 feet wide is surrounded by a rock path of uniform width. If the area of the path is 336 square feet, then what is its width?



$$(2x + 30)(2x + 20) = 600$$

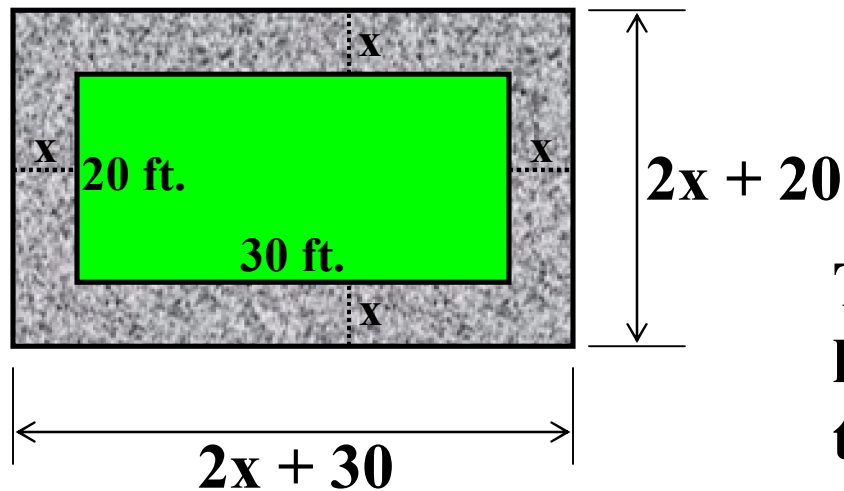
This represents the area of the larger rectangle, which includes the garden (600 square feet)

Represent all unknowns in terms of the same variable.

Write an **E**quation.

Algebra I Class Worksheet #3 Unit 12 RESAC

6. A rectangular garden 30 feet long and 20 feet wide is surrounded by a rock path of uniform width. If the area of the path is 336 square feet, then what is its width?



$$(2x + 30)(2x + 20) = 600 + 336$$

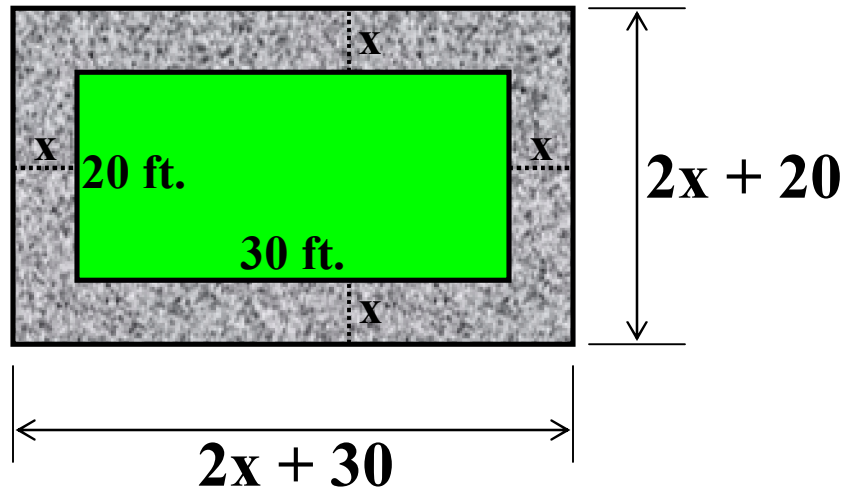
This represents the area of the larger rectangle, which includes the garden (600 square feet) and the path (336 square feet).

Represent all unknowns in terms of the same variable.

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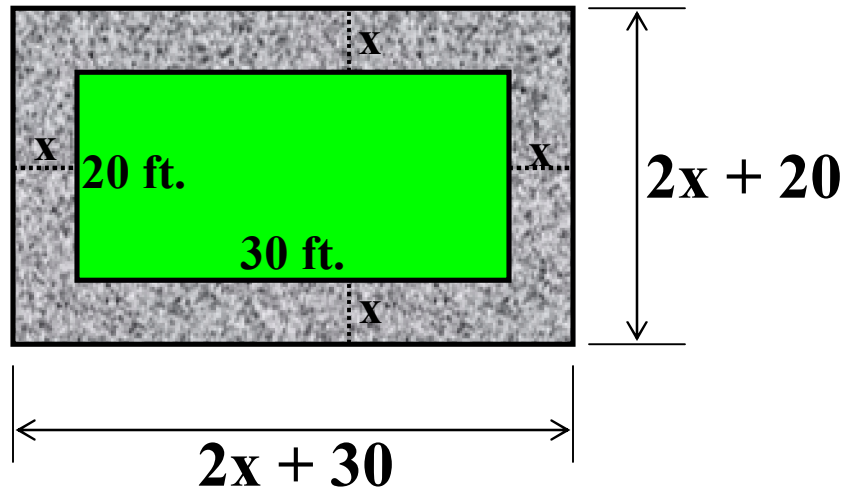
$$(2x + 30)(2x + 20) = 600 + 336$$

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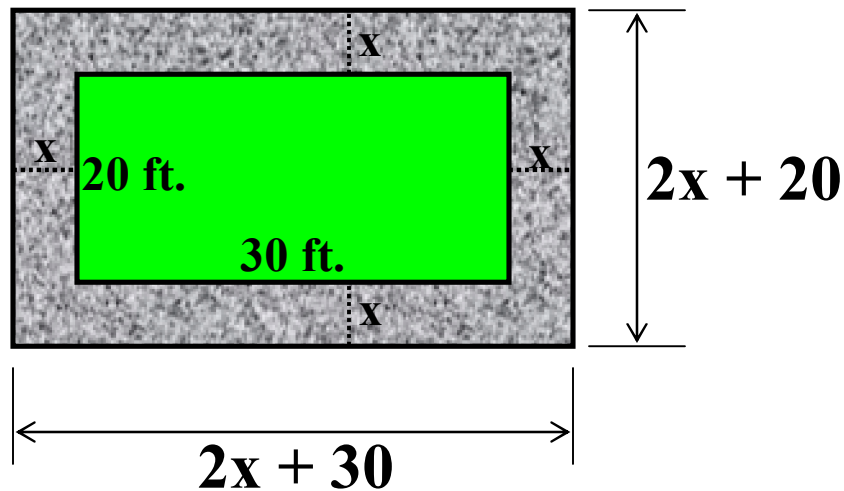
There is another way of deriving an equation for this problem.

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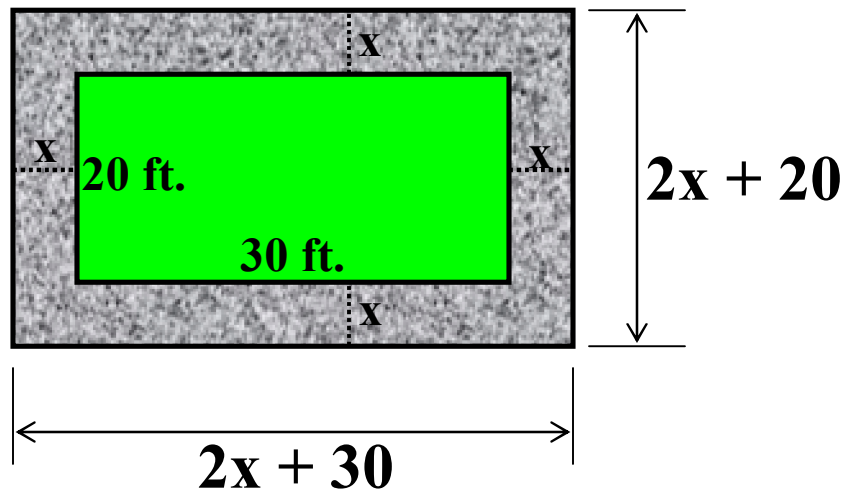
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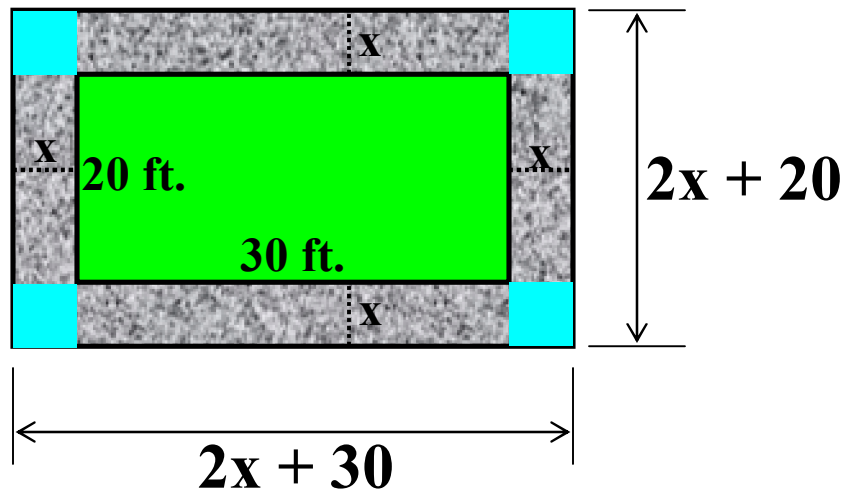
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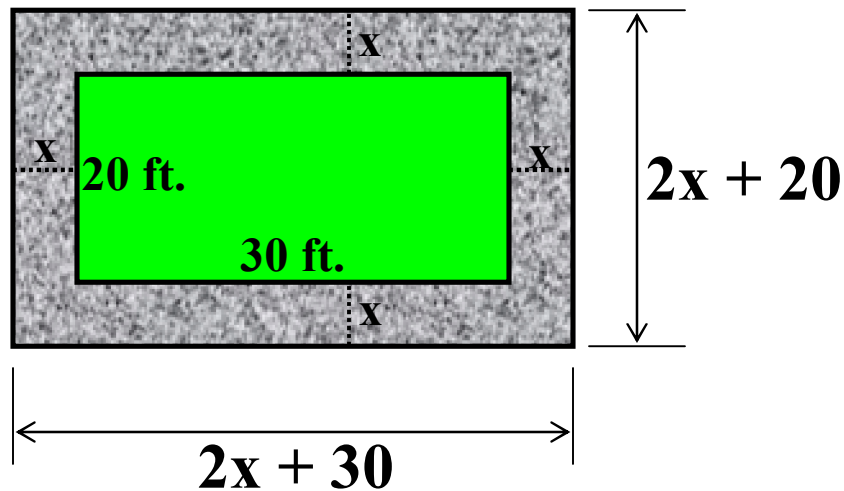
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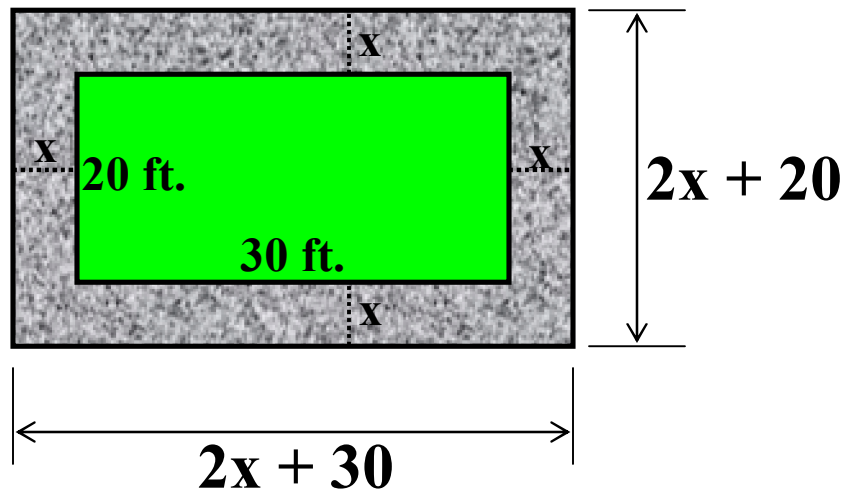
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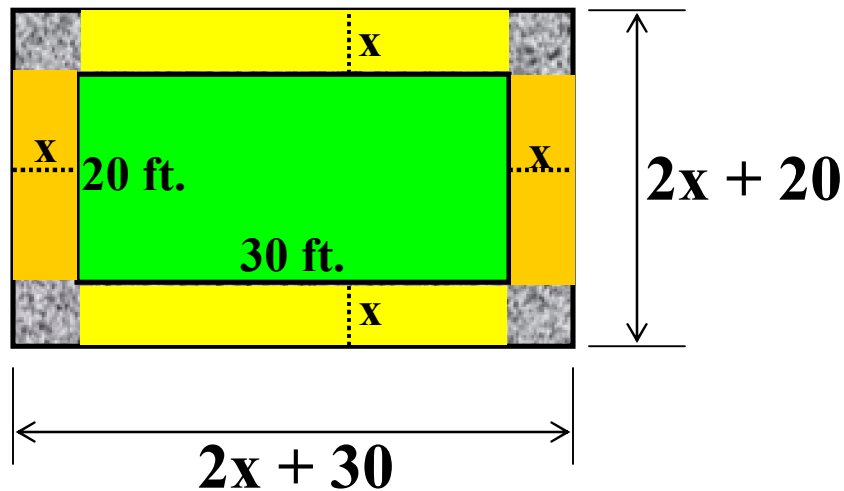
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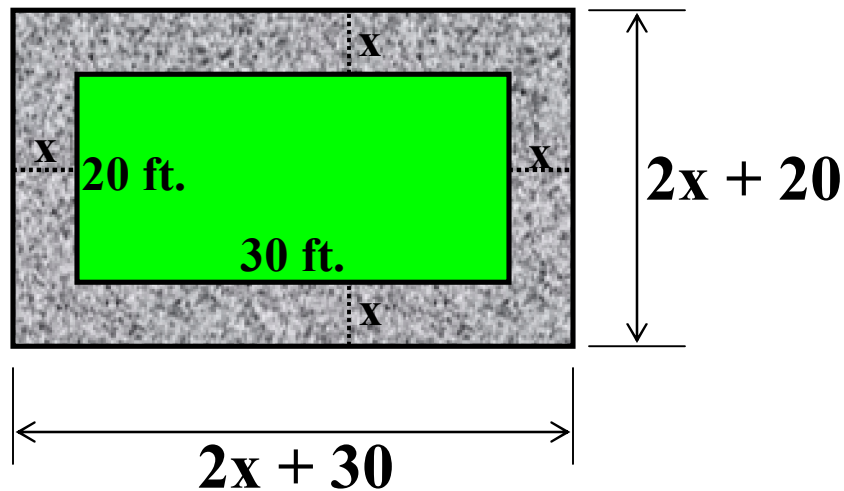
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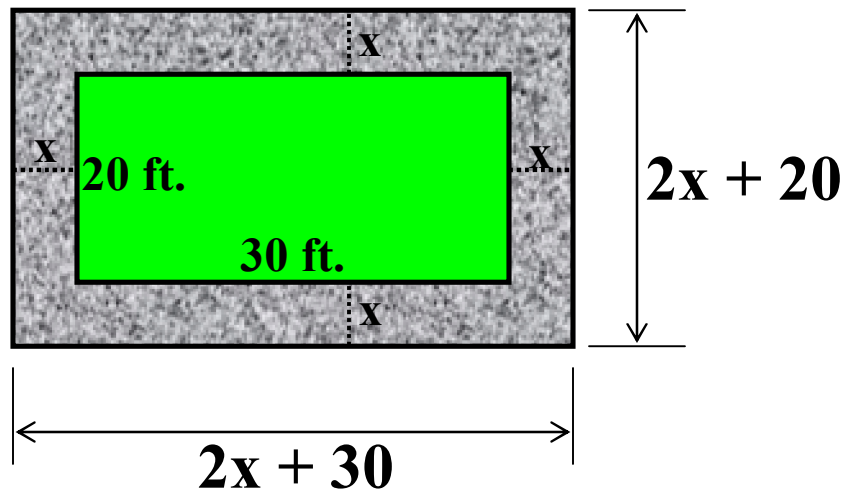
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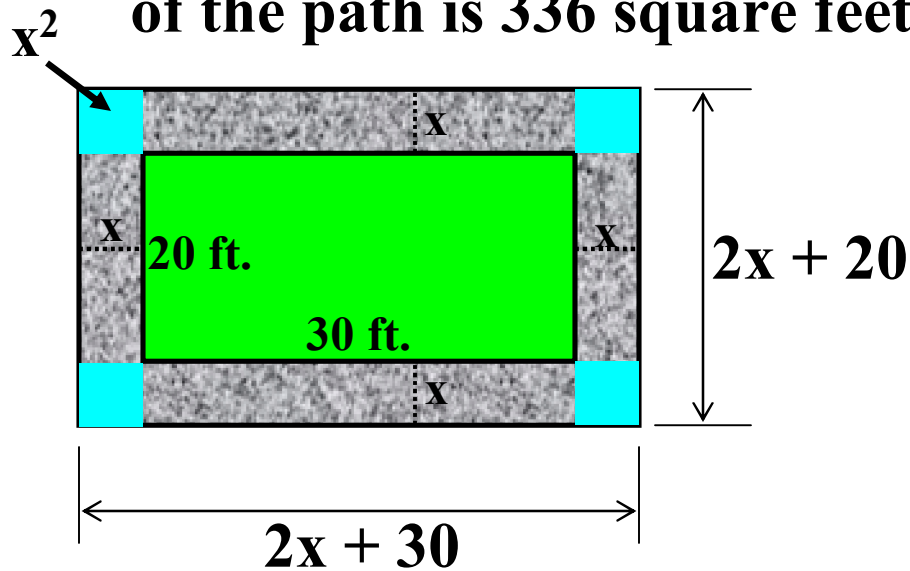
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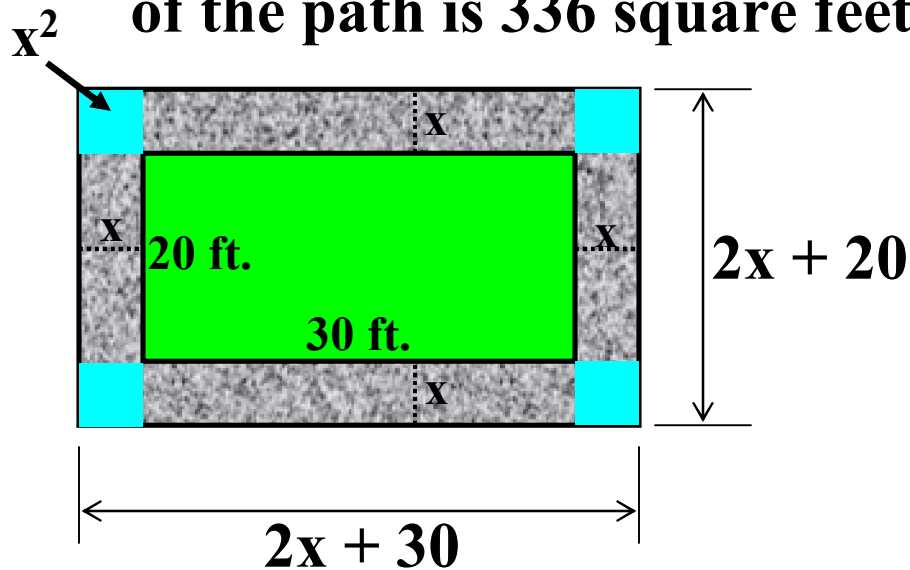
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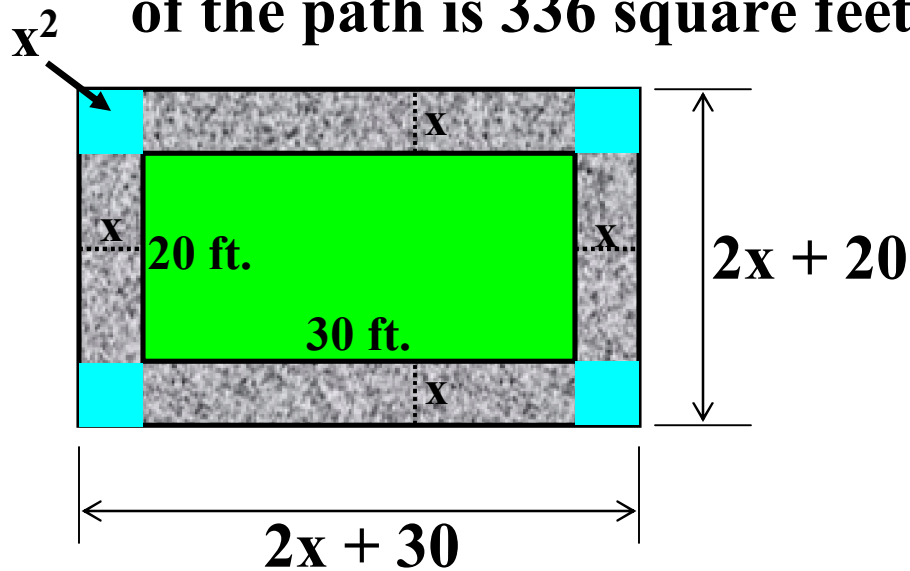
$$4x^2$$

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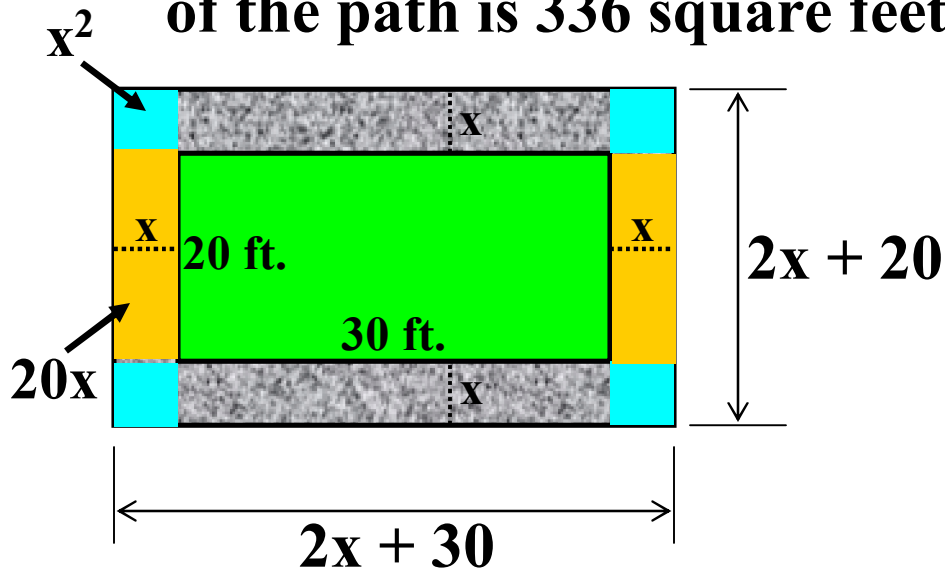
$$4x^2 +$$

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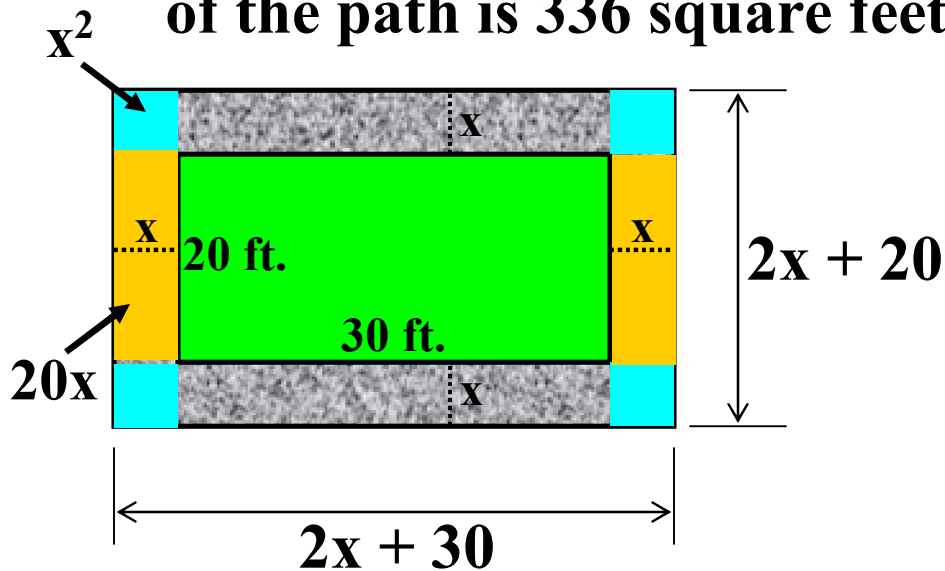
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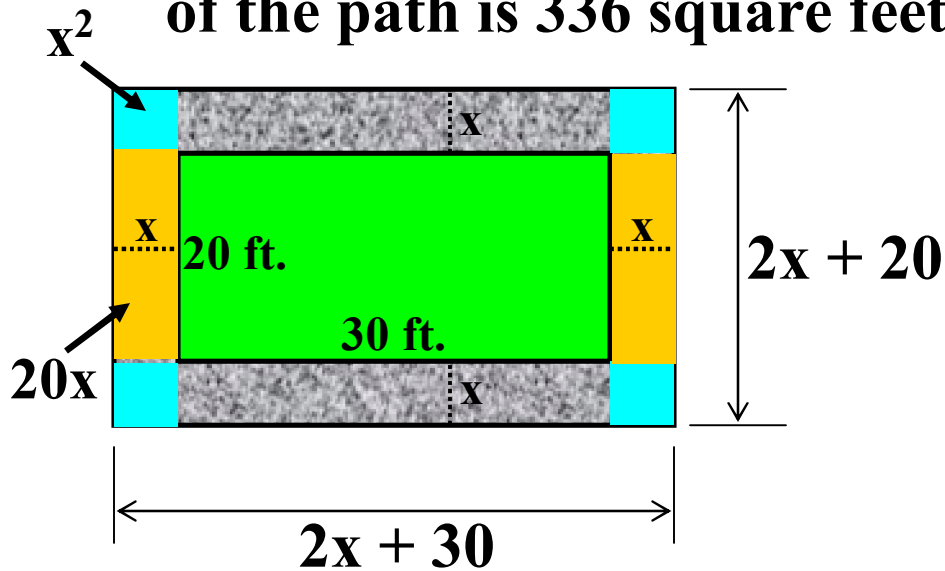
$$4x^2 + 40x$$

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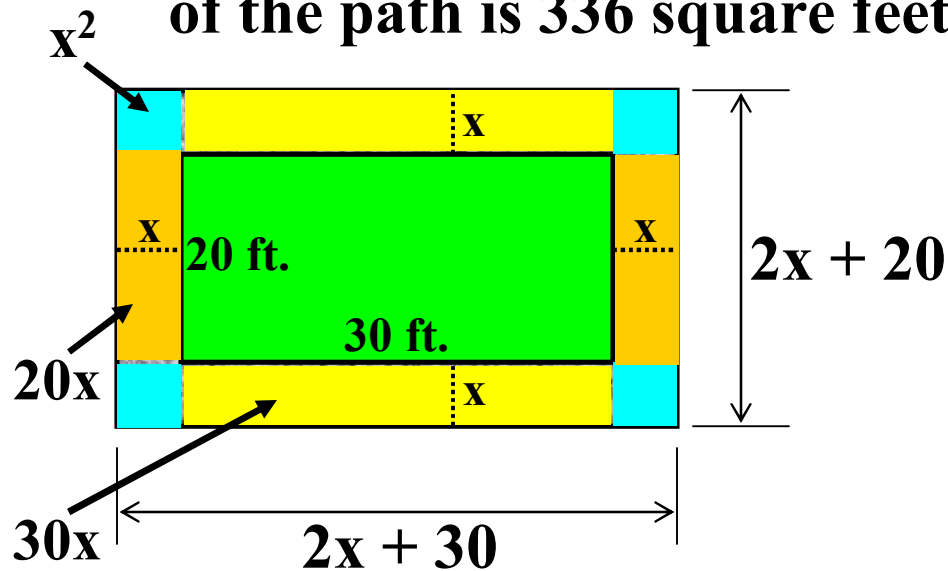
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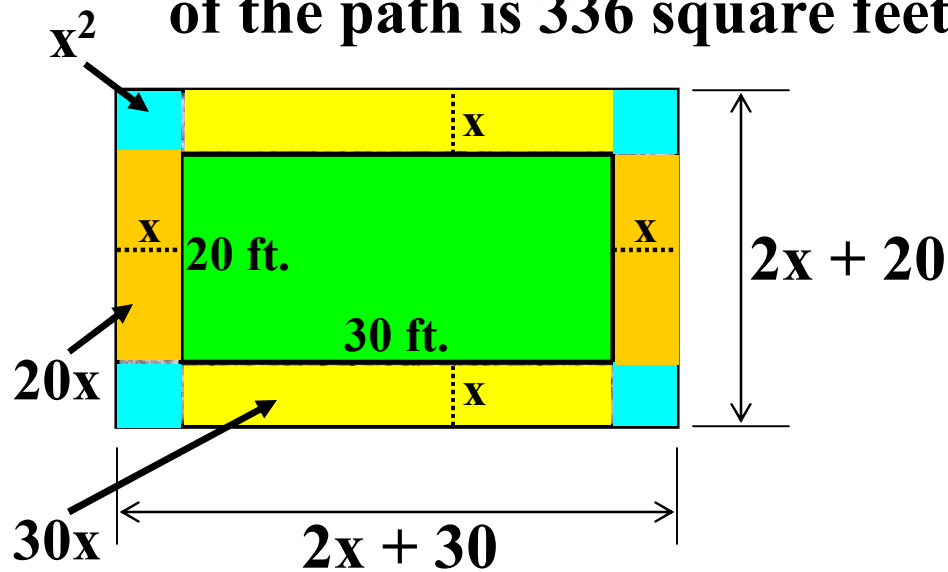
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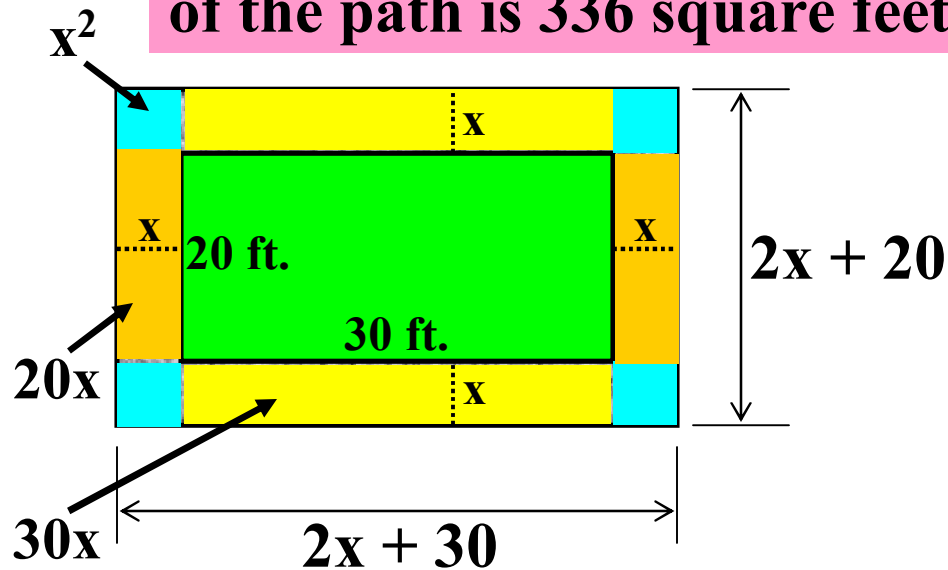
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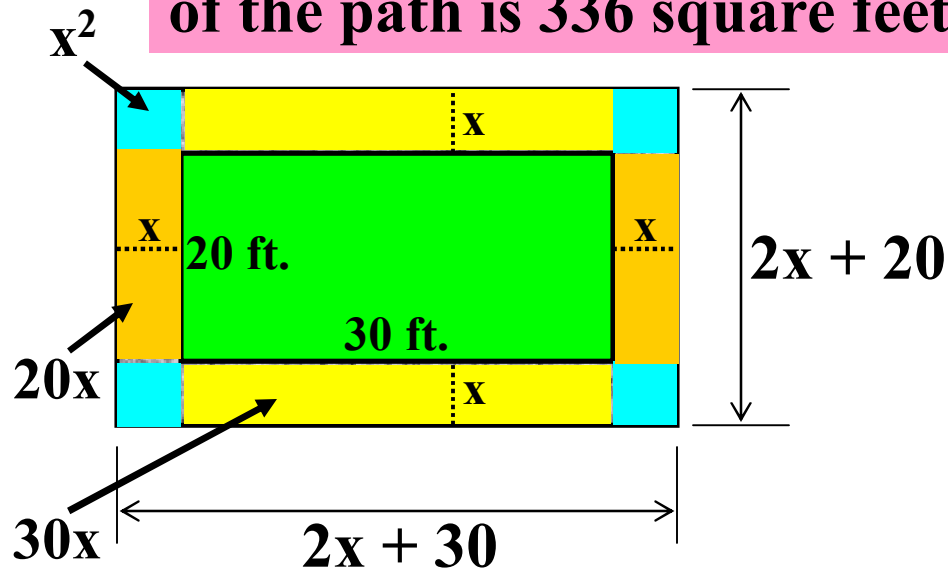
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Write an Equation.

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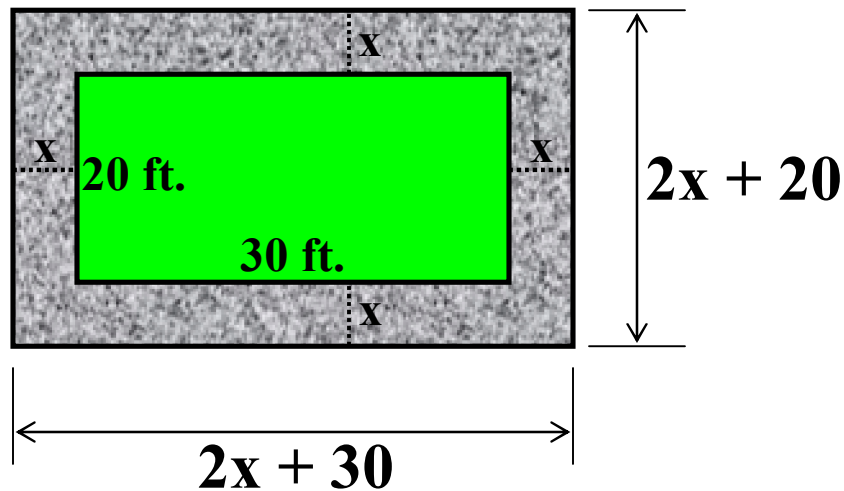
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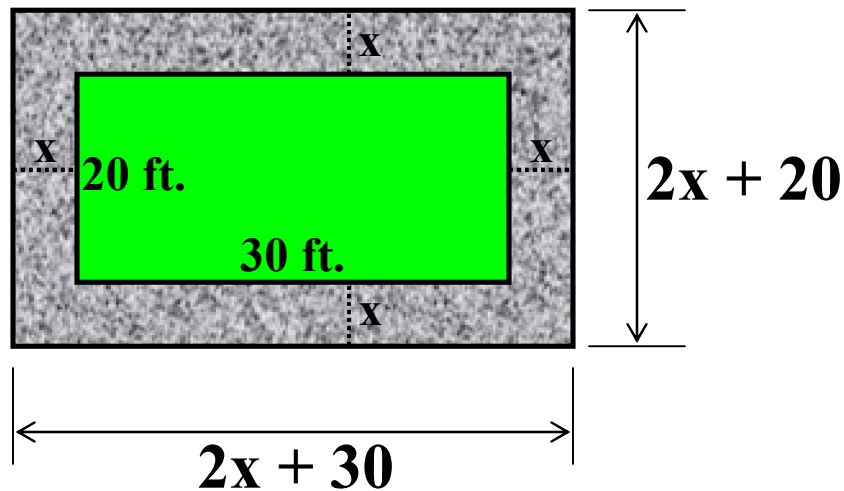
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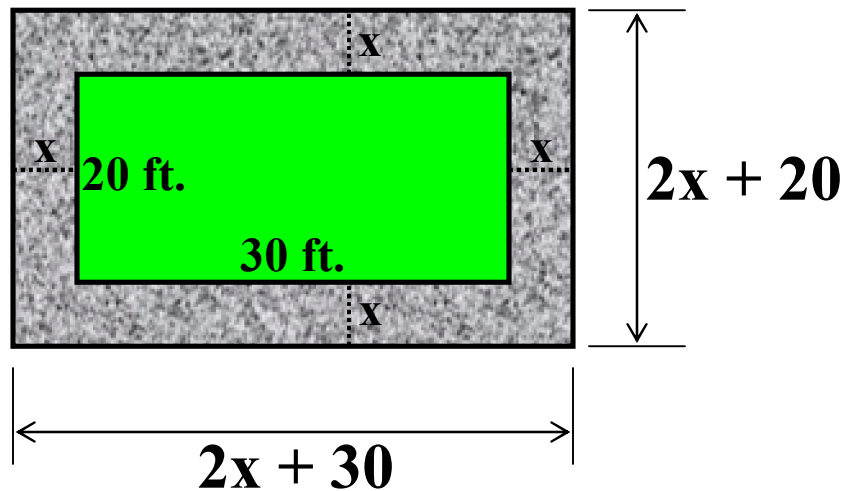
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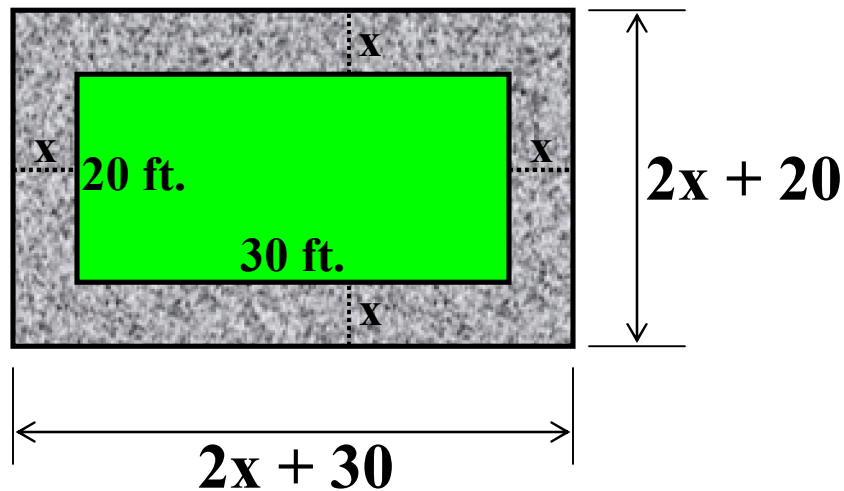
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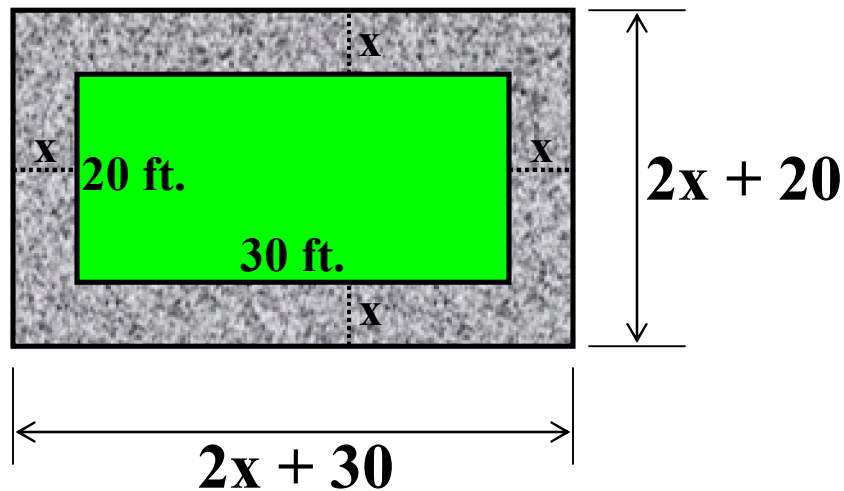
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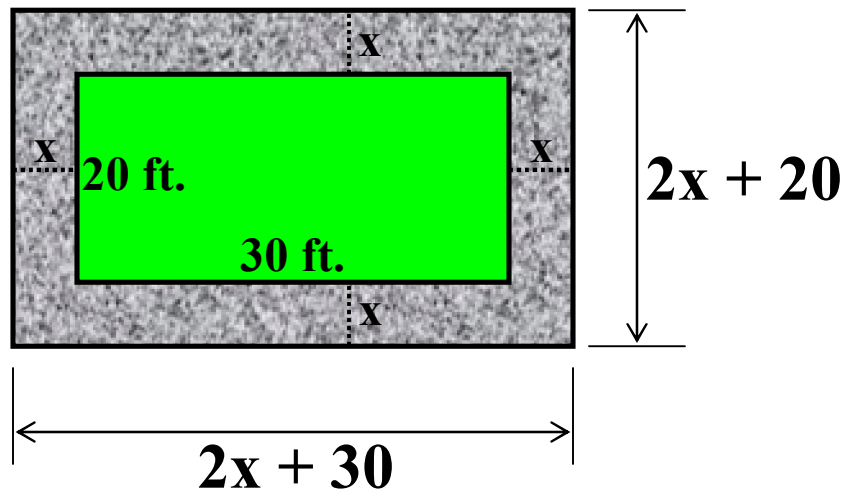
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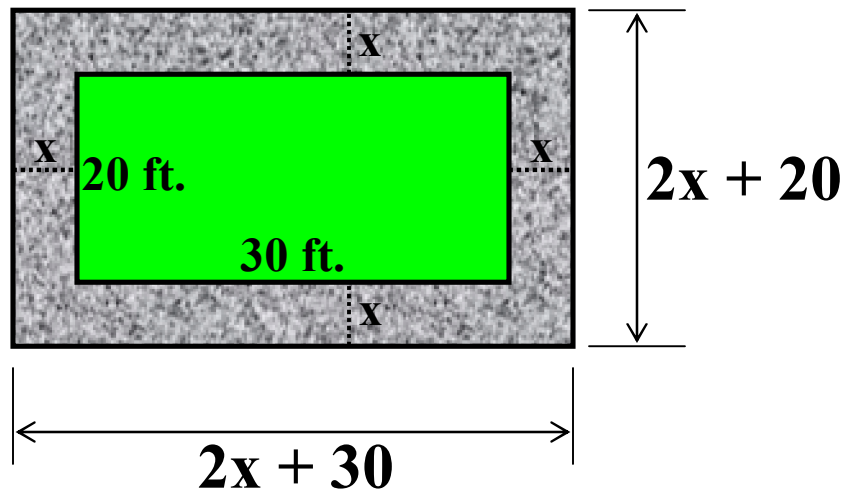
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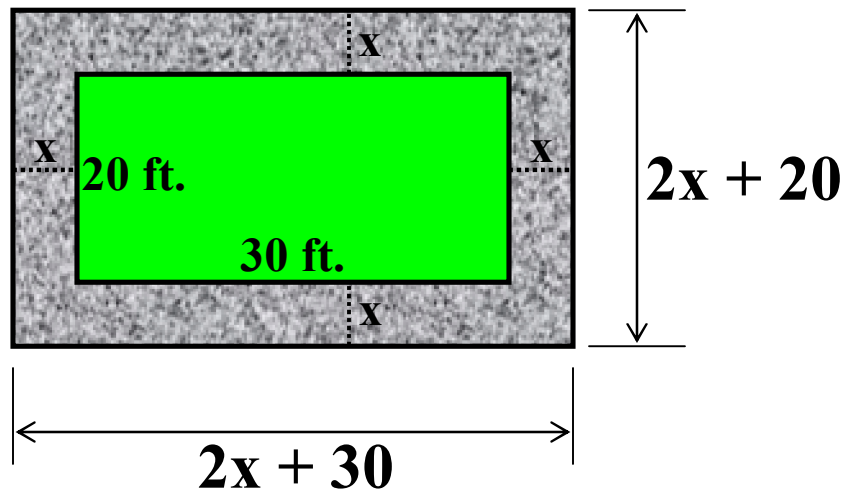
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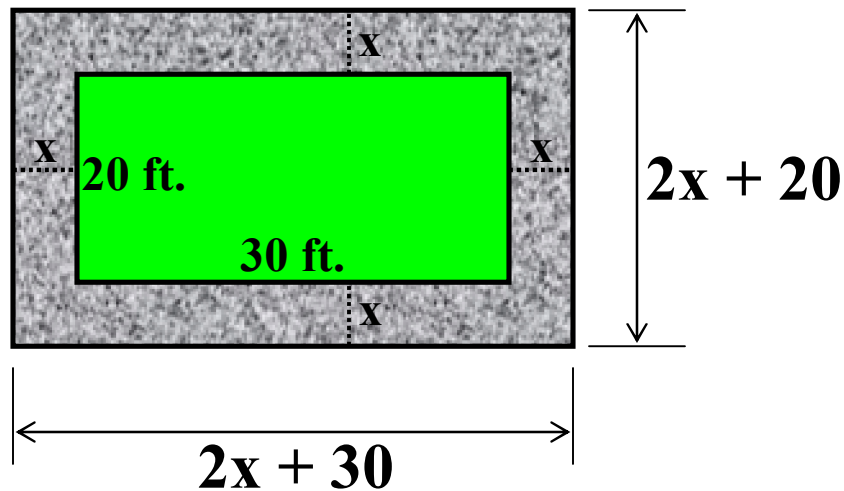
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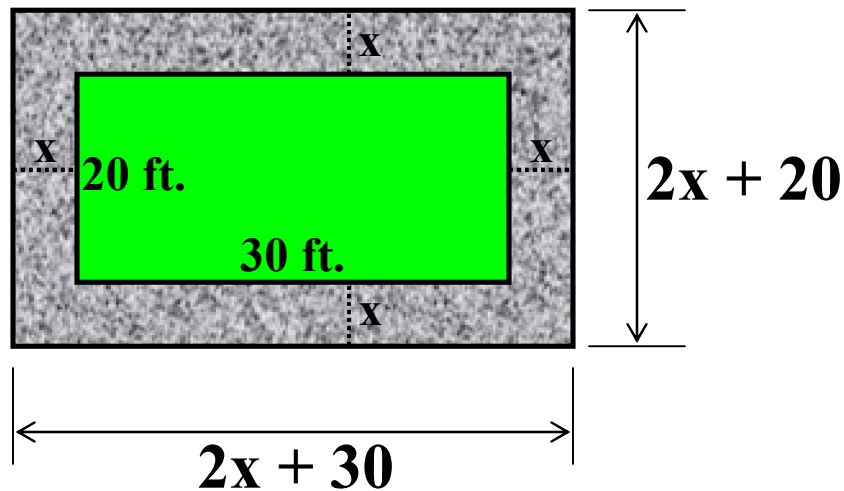
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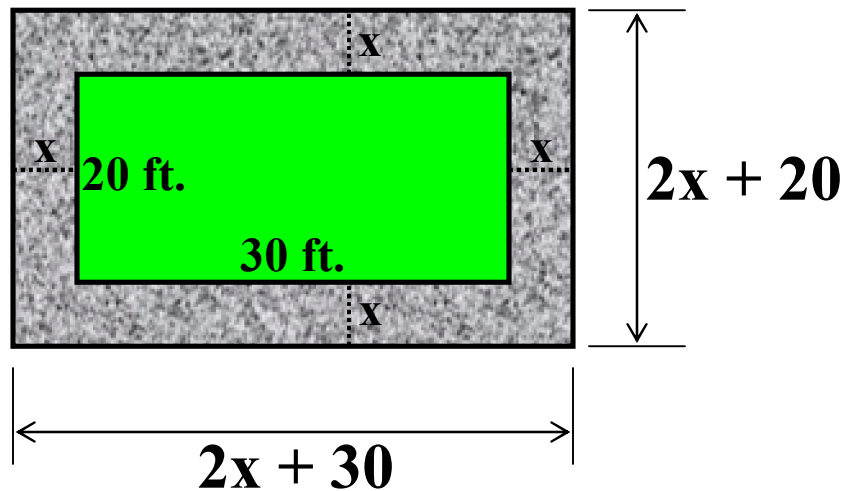
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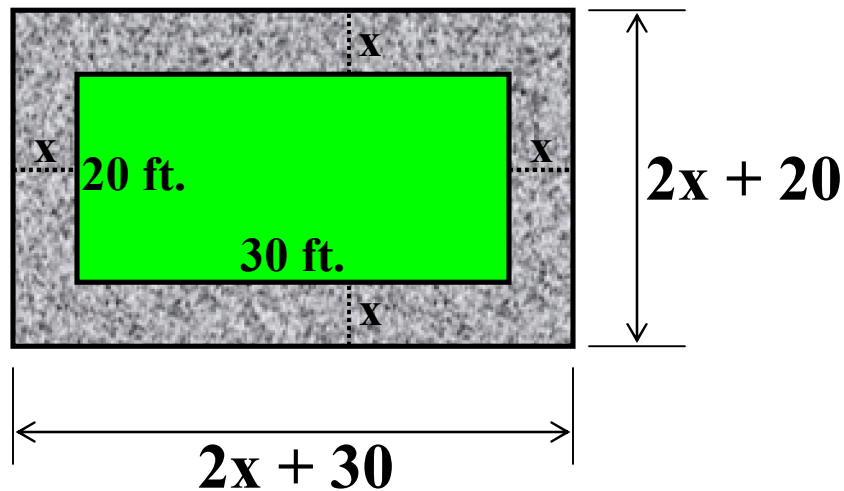
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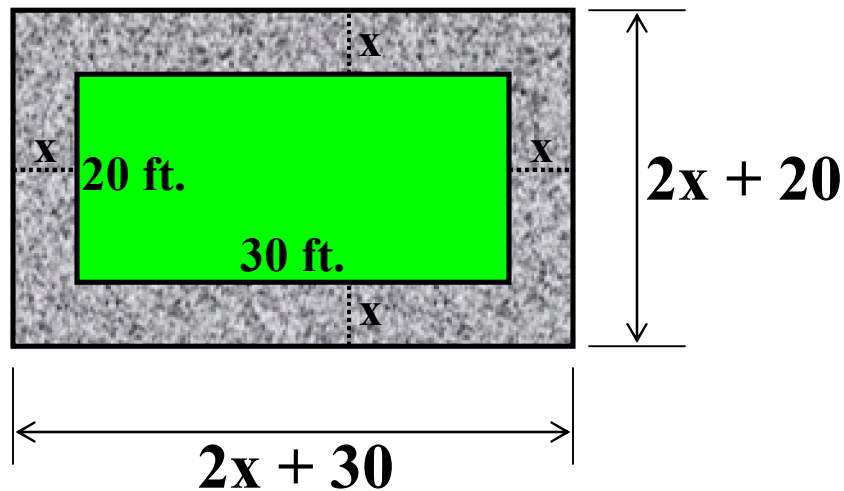
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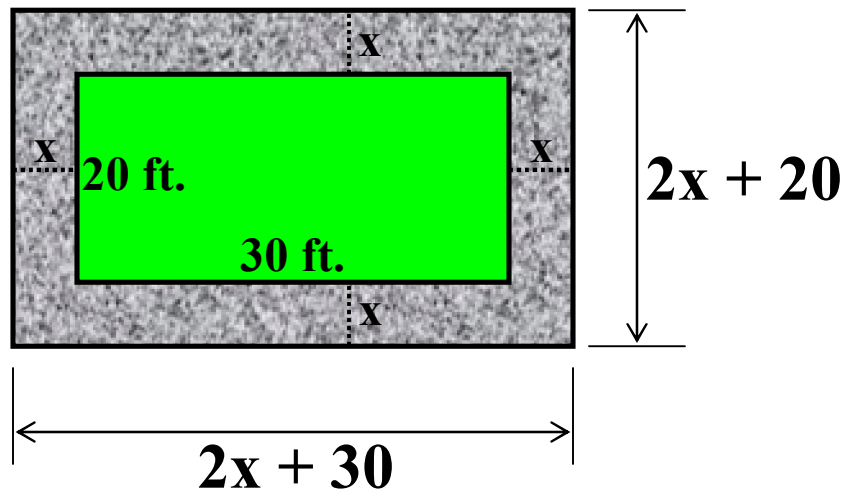
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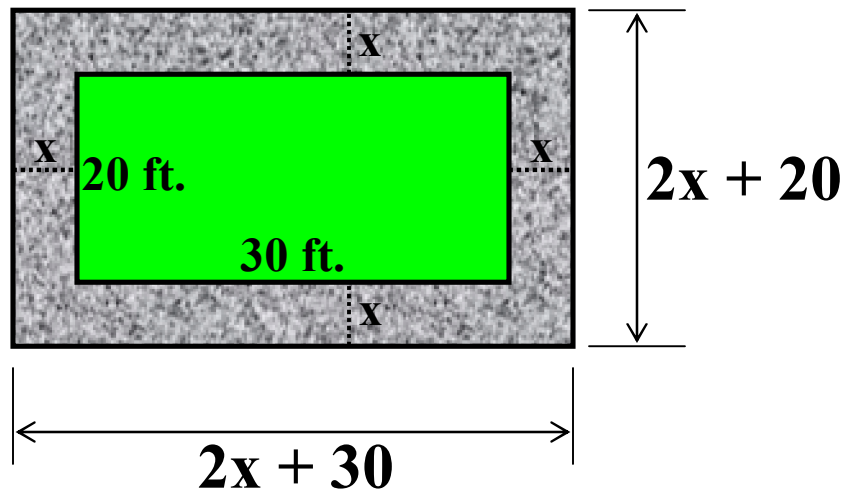
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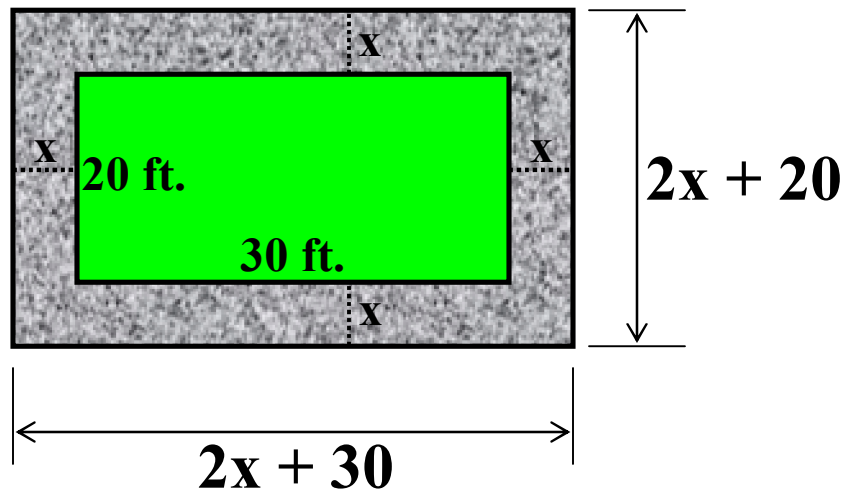
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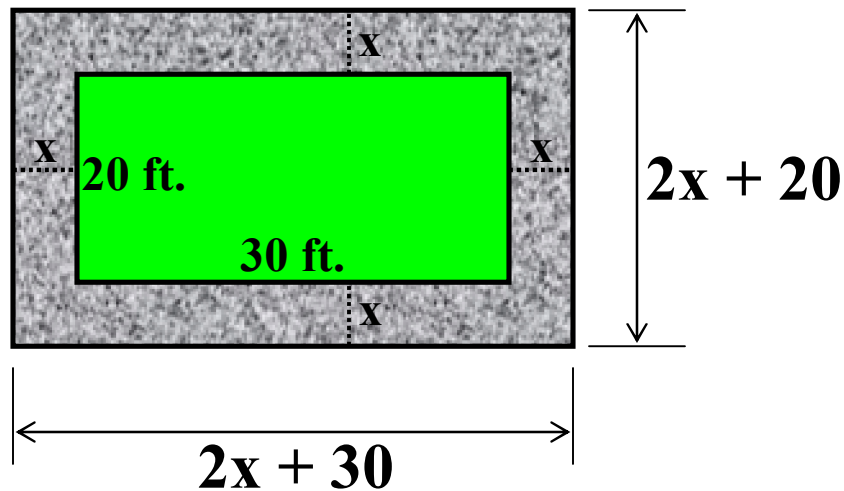
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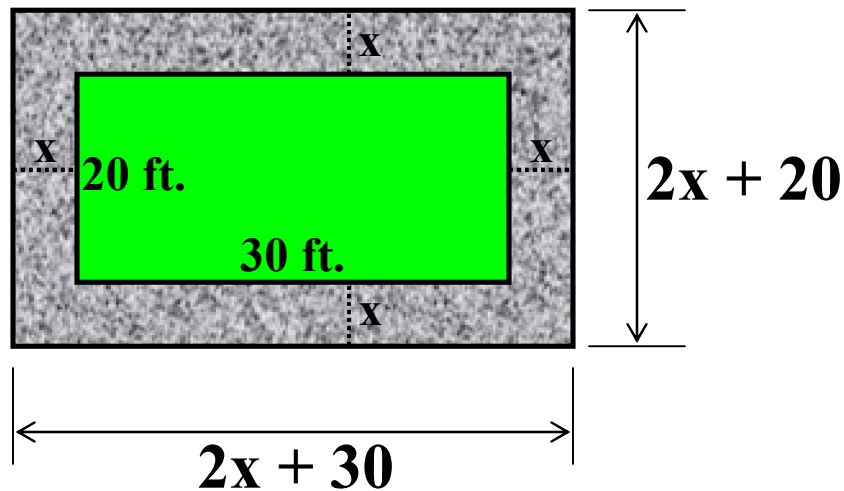
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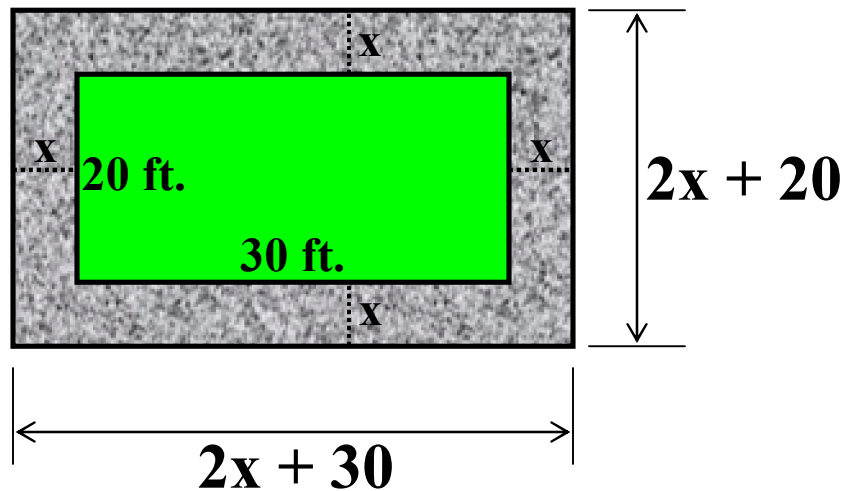
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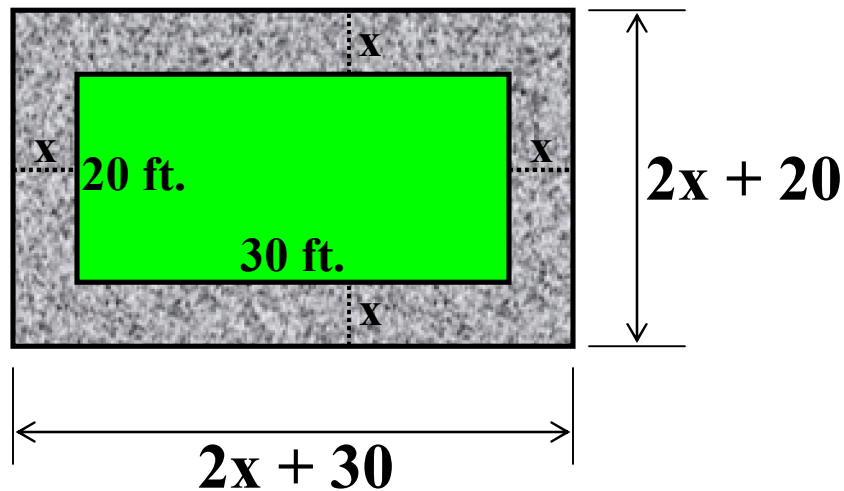
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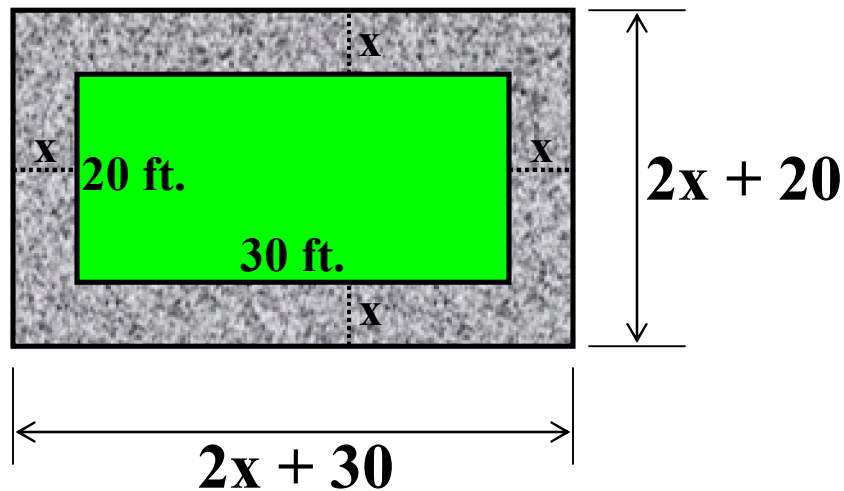
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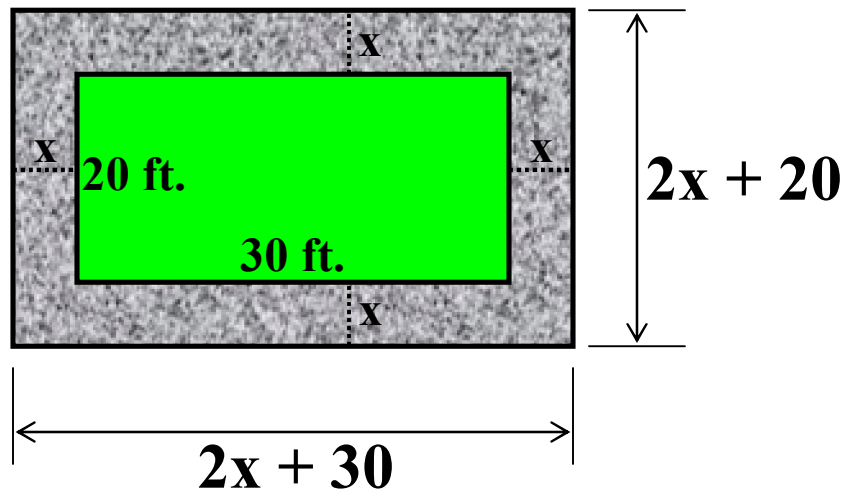
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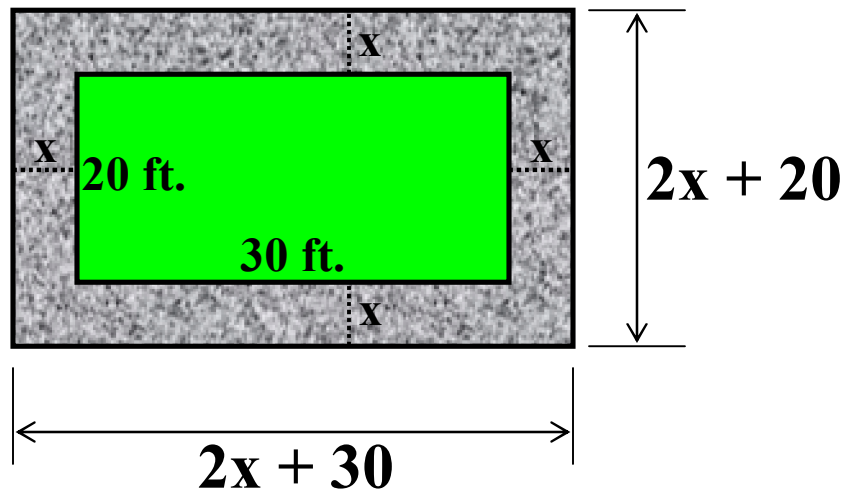
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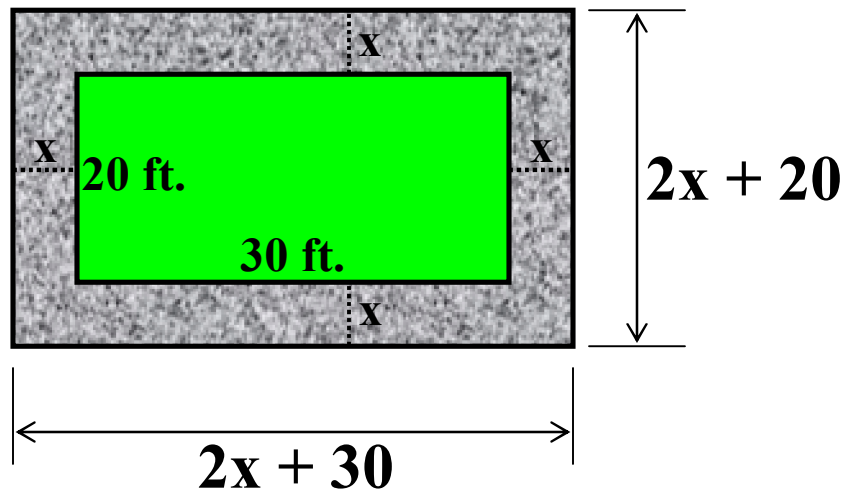
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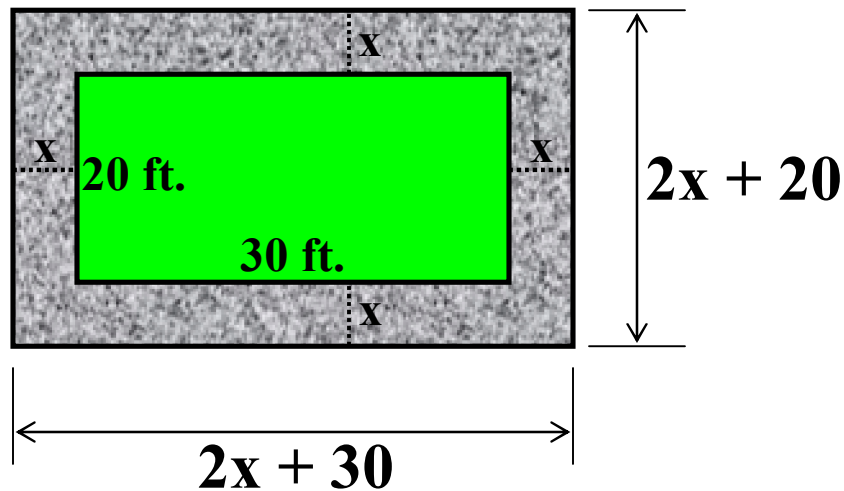
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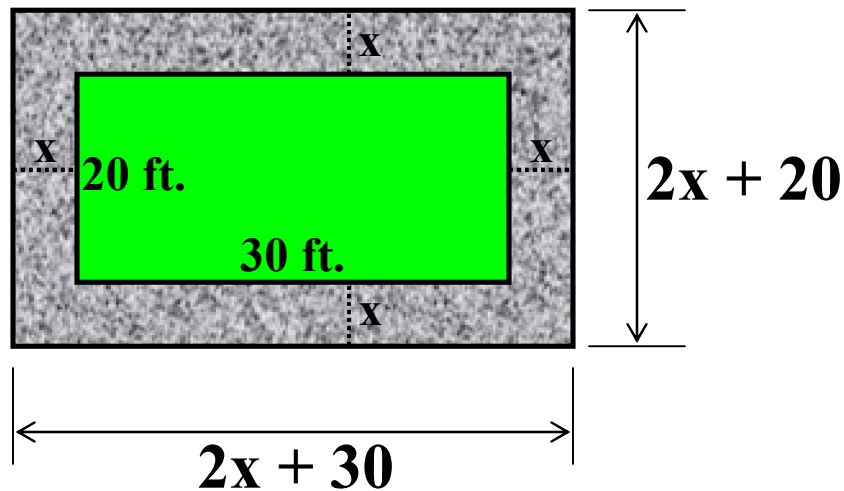
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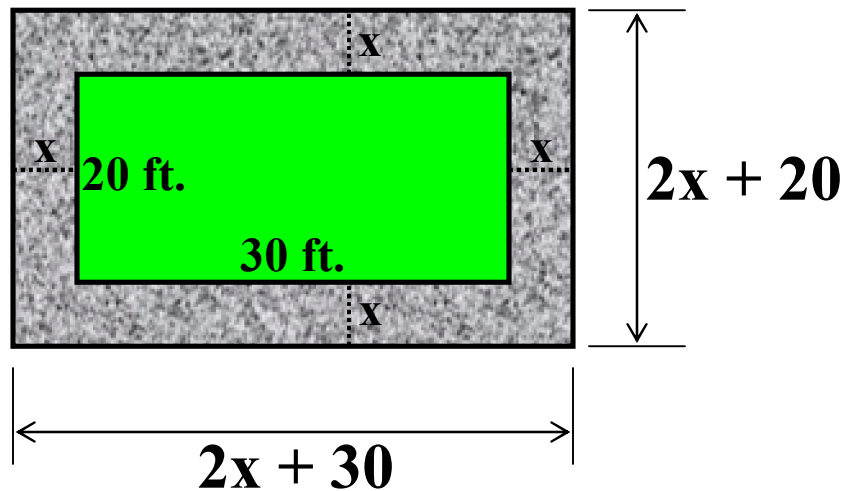
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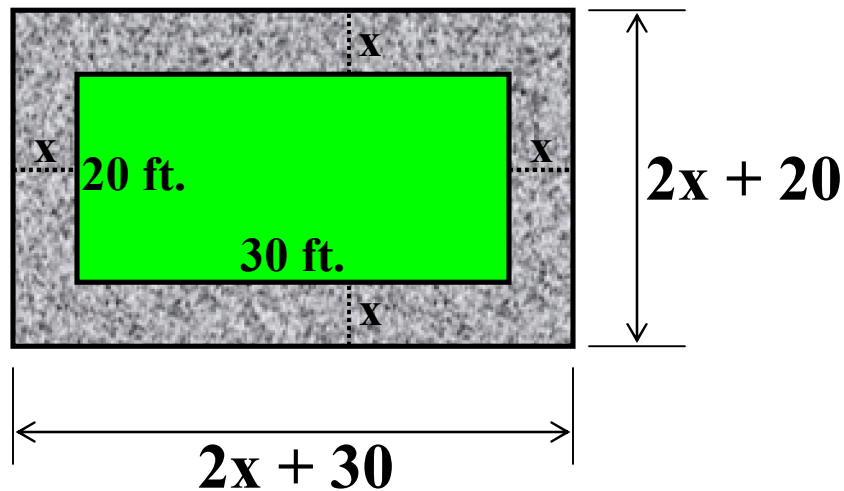
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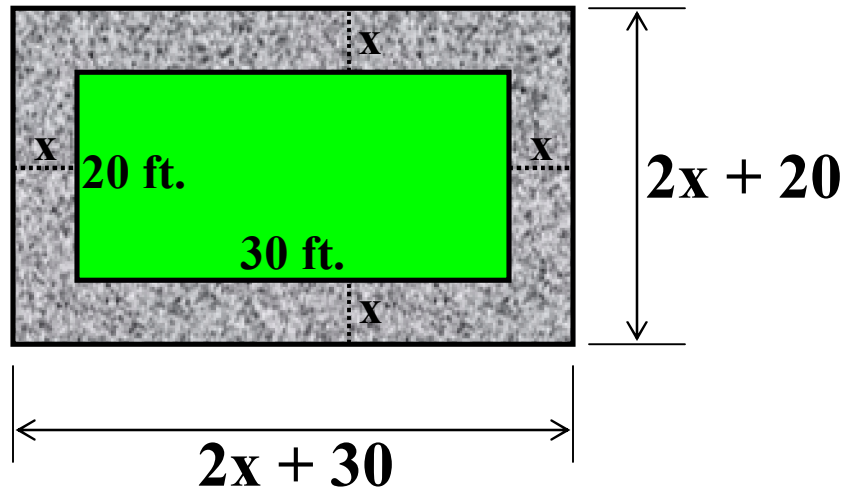
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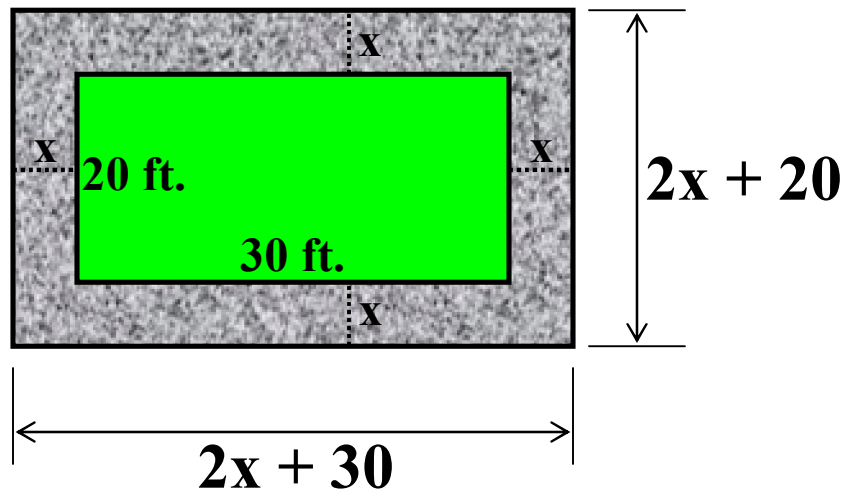
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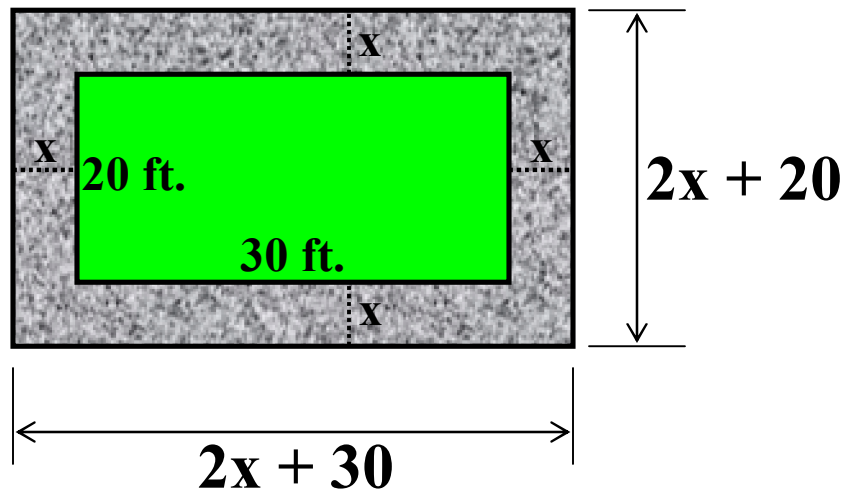
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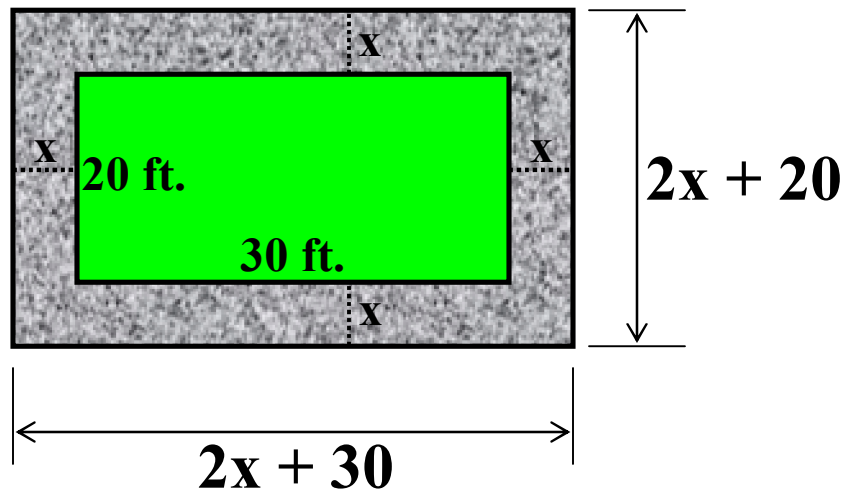
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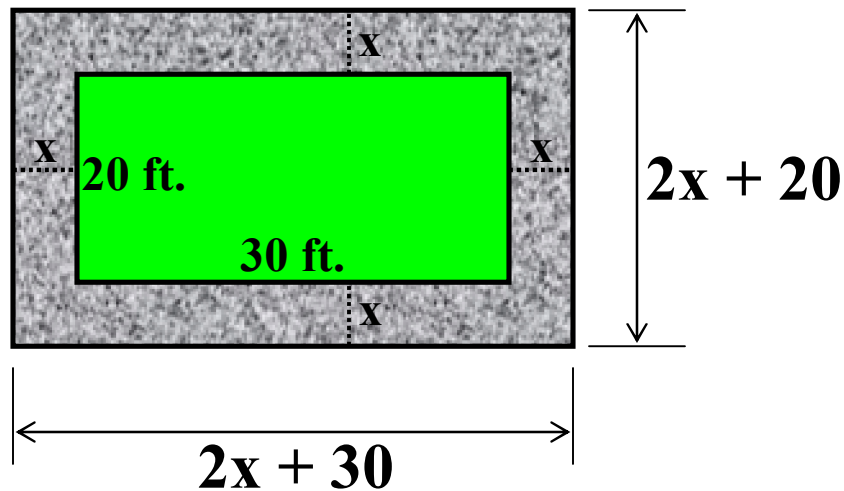
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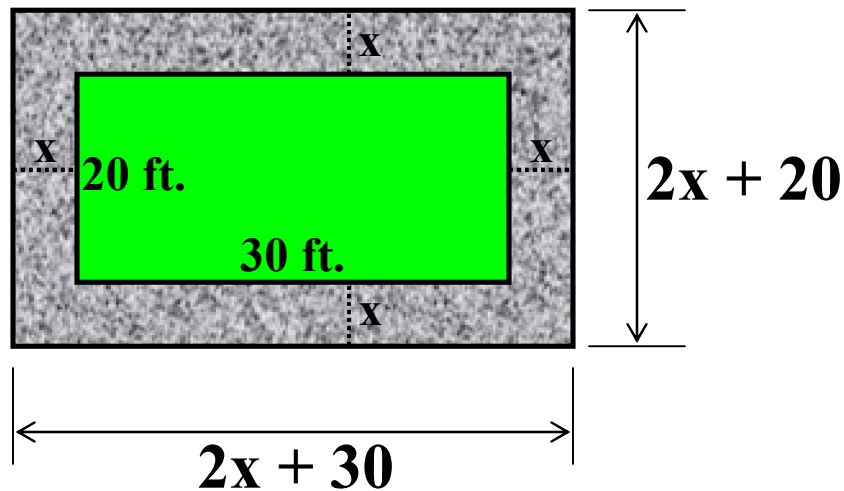
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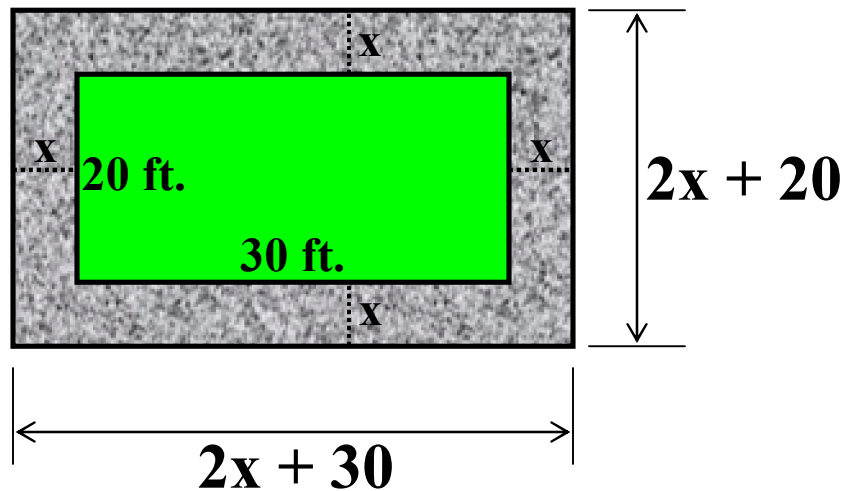
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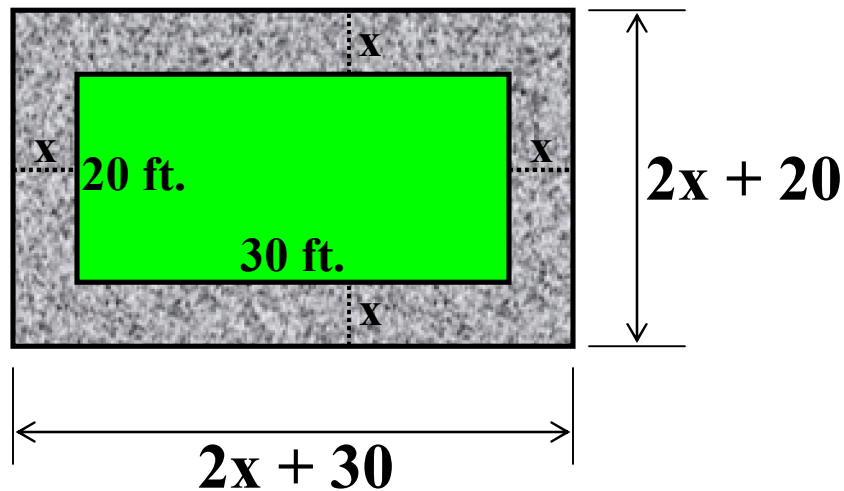
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Algebra I Class Worksheet #3 Unit 12 RESAC

6. A rectangular garden 30 feet long and 20 feet wide is surrounded by a rock path of uniform width. If the area of the path is 336 square feet, then what is its width?



$$(2x + 30)(2x + 20) = 600 + 336$$

$$4x^2 + 100x + 600 = 936$$

$$4x^2 + 100x - 336 = 0$$

$$x^2 + 25x - 84 = 0$$

$$(x - 3)(x + 28) = 0$$

$$x - 3 = 0 \text{ or } x + 28 = 0$$

$$x = 3 \text{ or } x = -28$$

Represent all unknowns in terms of the same variable.

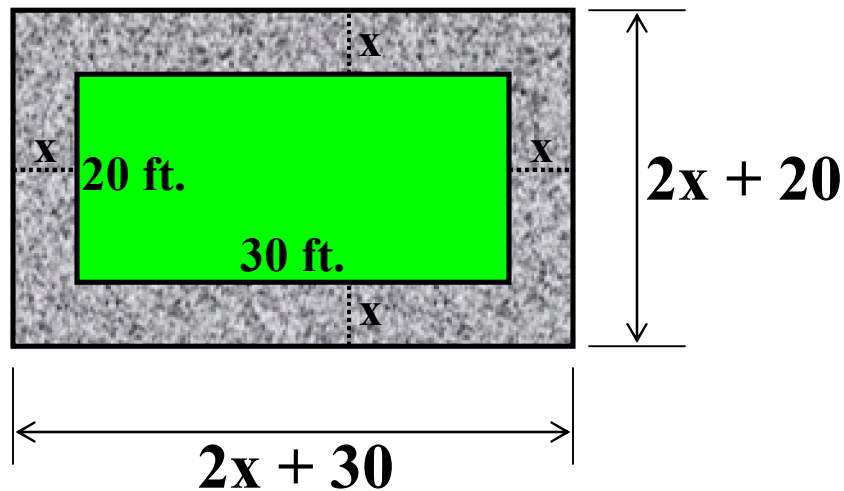
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AnsWER the question (complete sentence).

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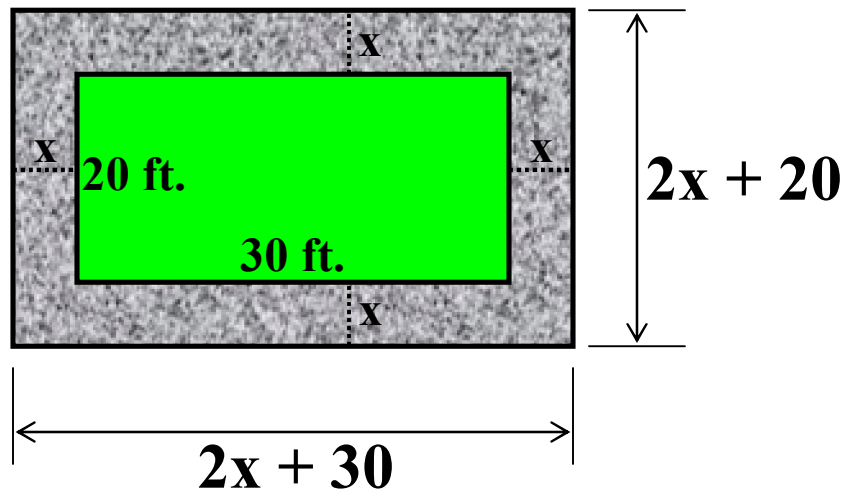
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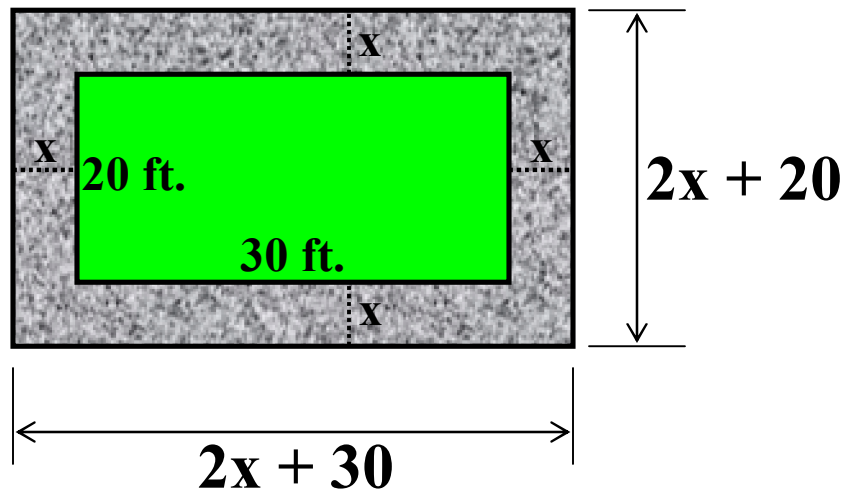
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The path is 3 feet wide.

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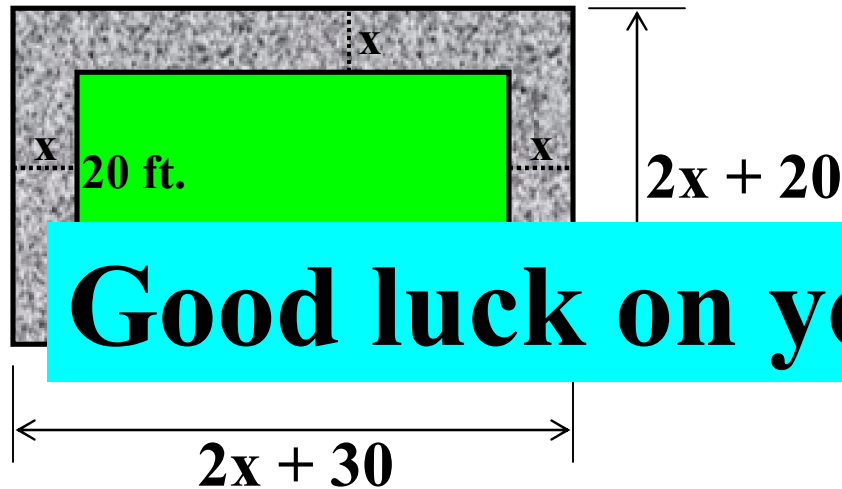
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Good luck on your homework !!

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