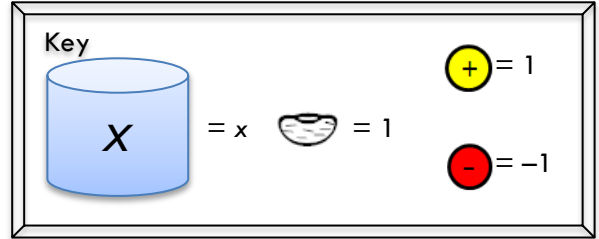


Solving One-Variable Equations and Inequalities

Explain Independent Practice – Answer Key

Directions: For the problem situation below, write an inequality you can use to solve the problem. Use cups and counters to solve the inequality.



1. John must draw a square whose perimeter is greater than 20. What are the possible lengths for the sides of the square?

a) Write the inequality.
 $4x > 20$

b) Solve the inequality using cups and counters. Sketch each step.

Model	Symbols
	$4x > 20$
	$4x \div 4 > 20 \div 4$
	$x > 5$ Each side length must be greater than 5.



Use the situation below to answer questions 2 – 4.

The perimeter of a square is 24 inches.

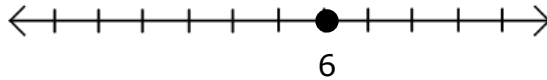
2. Write an equation that could be used to solve for x , the length of the side of the square.

$$4x = 24$$

3. Solve the equation for x .

$$x = 6$$

4. Identify the location of the solution on the number line below.

**Use the situation below to answer questions 5 – 7.**

Jake is treating his friends to lunch at Burger Hut. The burger combo at Burger Hut cost \$6. He wants to spend no more than \$48.

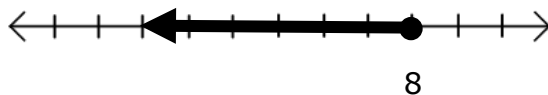
5. Write an inequality that could be used to solve for x , the number of burger combos Jake can buy.

$$6x \leq 48$$

6. Solve the inequality for x .

$$x \leq 8$$

7. Represent the solution on the number line below.



In questions 8 – 11, solve the equation.

8. $4.8x = 15.36$

$x = 3.2$

10. $x + 27.5 = 34.3$

$x = 6.8$

9. $\frac{x}{9} = -3$

$x = -27$

11. $5.5x = -47.85$

$x = -8.7$

In questions 12 – 15, solve the inequality.

12. $9x \leq 36.9$

$x \leq 4.1$

14. $-11x > 88$

$x < -8$

13. $x + 5.7 \geq -7.4$

$x \geq -13.1$

15. $x - \frac{1}{2} < \frac{1}{4}$

$x < \frac{3}{4}$

