Name: _____

# Writing and Solving Linear Models in One Variable

**Steps to Solve Applications of Linear Equations**

1. Read and reread the problem.
2. Let a variable represent what we are looking for.
3. Write the equation.
4. Solve the equation.
5. Check the solution in the original stated problem.

Follow along with the video and take notes.

A 14-foot board is to be cut into 2 pieces so that one piece is 2 feet longer than the other is. How long should each piece be?

Sam is 3 years older than twice his brother Jerry's age. If the sum of their ages is 15, how old is Sam?

The perimeter of a rectangle is 36 centimeters. If the width is 7 centimeters, find the length. Draw a diagram.



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# Practice

Now you try it!

**Rewrite as mathematical expressions, and solve.**

**1.** The perimeter of a triangle is 388 inches. If side A is 40 inches long and side B is 15 inches more than twice the length of side C, what are the lengths of sides B and C?

**2.** If 3 sisters receive $180 and split it so that the middle sister gets twice as much as the youngest sister and the oldest sister gets three times as much as the youngest sister, how much does the youngest sister get?

**3.** The area of a trapezoid is 450 square centimeters. The bases of the trapezoid are 60 and 40 centimeters. What is the height of the trapezoid?

**4.** A 15-foot board is to be cut into 2 pieces with one piece 3 feet more than twice the length of the other piece. How long are the two pieces?



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