

COUNTDOWN Challenge

The Importance of Proportion

Proportions are helpful in solving many different kinds of problems. Study the challenges below and notice how proportions can be used to solve each of them. We completed the first problem as an example for you.

Type of Problem	Problem	Proportion	Equation	Solution
Similar polygons	<p>In this diagram, Triangle DCE is similar to Triangle DAG. What is the length of \overline{AG}?</p>	$\frac{4}{12} = \frac{10}{x}$	$4x = 120$ $\frac{4}{4} x = \frac{120}{4}$ $x = 30$	$\overline{AG} = 30$
Scale drawing	<p>Tanya is making a scale drawing of her house. She is using a 6 inch line on her drawing to represent the 30 foot width of her house. Tanya's room is 12 feet by 12 feet. What will be the length of the lines she uses to represent her room on the scale drawing?</p>	$\text{---} = \text{---}$		
Unit of measure	<p>How many feet is a 36 inch rope?</p>	$\text{---} = \text{---}$		
Price	<p>Five cans of apple juice cost \$4.00. How much will it cost to buy 25 cans of apple juice?</p>			
Discount	<p>What is the price of a \$50 dress marked down 25%?</p>			
Algebraic fractions	<p>Two plus x divided by twelve equals one divided by three. Solve for x.</p>			