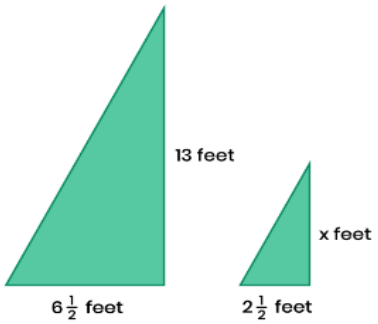
Proportions

Vocabulary **proportion:** an equation where two ratios are equal to each other **proportional relationship:** a collection of pairs of numbers that are in equivalent ratios	
Proportional Reasoning page ___	Quantities that can be written using _____ ratios have a _____ relationship. Write a few examples of proportions.
Learn to Solve for the Variable in a Proportion	Solve for x if $\frac{6}{100} = \frac{x}{20}$.
Think Like a Mathematician	Does the order of the ratios in a proportion really matter? Explain and give an example.
Real-World Connection	Amy and two friends placed an order at a drive-thru restaurant. Amy ordered one chicken sandwich meal for $8.99, including tax. Her two friends asked to order the same meal. How much would 3 chicken sandwich meals cost?
Real-World Connection	Diyana wanted to paint the walls in her bedroom. If 2 gallons of paint covers 125 square feet, how many square feet would $3\frac{1}{2}$ gallons cover?
Learn Another Way to Solve Proportions	For the proportion $\frac{a}{b} = \frac{c}{d}$, the _____ $a \cdot d$ and $b \cdot c$ are equal. This is known as the cross-product method. Test this method with $\frac{1}{2} = \frac{5}{10}$. Cross Product Method 
Real World Connection	Connor used 12 lemons to make 2 gallons of lemonade. How many lemons would he need to make $3\frac{1}{2}$ gallons of lemonade?

Important	When can the cross-product method be used?
Please use a separate sheet of paper to complete your practice problems.	
Solving Proportions in the Real World page ___	There are many situations in real life where you can compare _____ ratios in order to solve problems.
Real-World Connection	A hot air balloon rose 950 feet in 2 minutes. How many feet from the ground will it be in $5\frac{1}{2}$ minutes? What is the height in yards? Round to the nearest yard.
Real-World Connection	The side lengths of the triangles shown are proportional. Find the height, *x*, of the smaller triangle.  How much smaller is the triangle with height of 5 feet?
Real-World Connection	Sweetness Candy Store sells candy by the pound. The table shows the number of pounds and cost for candy at the store. How much would it cost to purchase 4.5 pounds of candy?

Pounds of candy	1.5	2	2.75	3.2
Cost	$7.50	$10	$13.75	$16

How much is each pound of candy?

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