
Algebra 1
Ratios and Proportions
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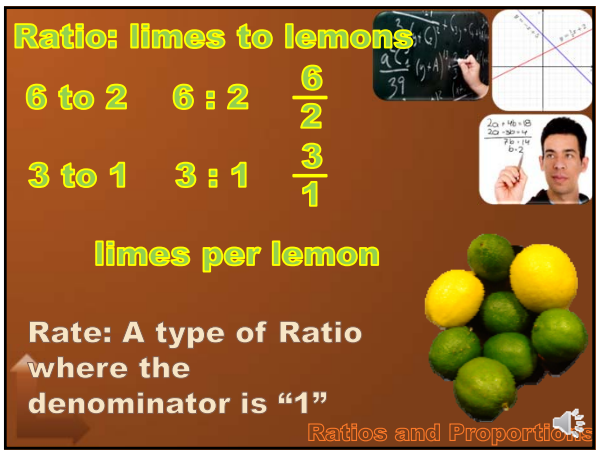
Overview


Ratio: limes to lemons
6 to 2 6 : 2 6/2
3 to 1 3 : 1 3/1
limes per lemon
Rate: A type of Ratio where the denominator is "1"
Ratios and Proportions

Ratio: limes to lemons

$\frac{3*2}{1*2} = = \frac{6}{2}$

$\frac{3}{1}$

Proportional

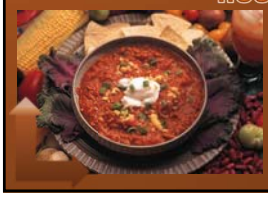
3 is to 1 as 6 is to 2

Ratios and Proportions

My salsa recipe uses 6 tomatoes and makes 1 quart of salsa.

$\frac{6}{1} = \frac{x}{4}$

I need to make 4 quarts of salsa. How many tomatoes do I need?



Ratios and Proportions

My salsa recipe uses 6 tomatoes and makes 1 quart of salsa.

Qt. of Salsa	Number of Tomatoes
1	6
2	12
3	18
4	24

$\frac{1\ Qt.\ Salsa}{6\ Tomatoes} = = \frac{3\ Qt.\ Salsa}{18\ Tomatoes}$

Ratios and Proportions

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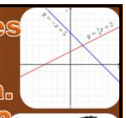


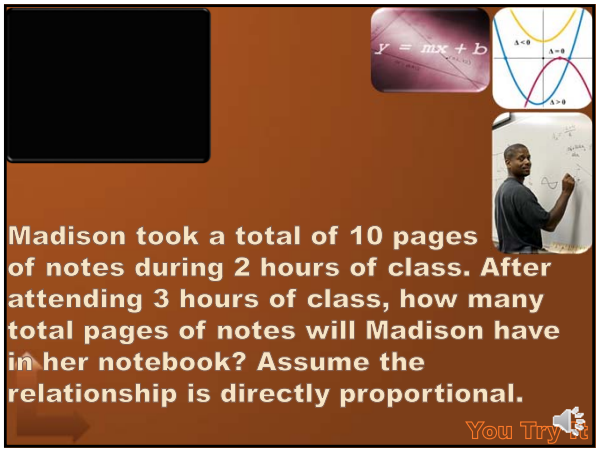
$\frac{1}{6} \times \frac{4}{t}$ $\frac{1}{4} \times \frac{6}{t}$

$1 * t = 6 * 4$ $t = 24$

Cross Products

Ratios and Proportions

240 x



Madison took a total of 10 pages of notes during 2 hours of class. After attending 3 hours of class, how many total pages of notes will Madison have in her notebook? Assume the relationship is directly proportional.

You Try It

$$\frac{10 \text{ pages}}{2 \text{ hours}} = \frac{x \text{ pages}}{3 \text{ hours}}$$

$$30 = 2x$$

$$15 = x$$

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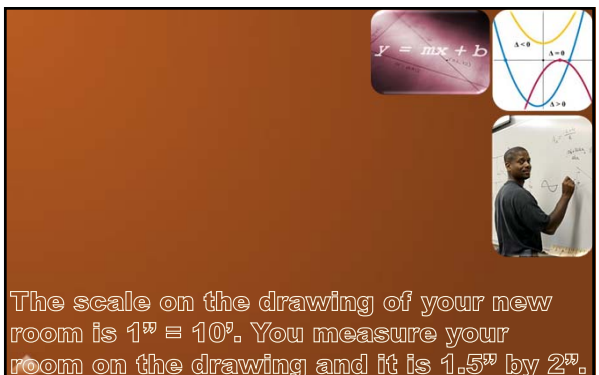
You Try It:



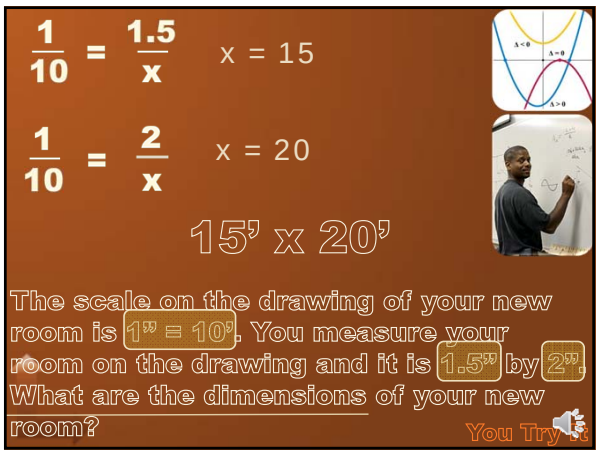
The scale on the drawing of your new room is 1" = 10'. You measure your room on the drawing and it is 1.5" by 2". What are the dimensions of your new room?

You Try It:

$$\frac{1}{10} = \frac{1.5}{x} \quad x = 15$$

$$\frac{1}{10} = \frac{2}{x} \quad x = 20$$

15' x 20'



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