

JANUARY 14, 2015

1st
2nd

STARTER

~~1~~ ~~2~~ ~~3~~ ~~4~~ ~~5~~ ~~6~~ ~~7~~ ~~8~~ 15

Write the numbers from 1 to 30 on your paper.

Add the first two numbers, write it at the end of the list, then cross out the two numbers you added.

Keep repeating this process until you have just one number left.

How many times did you need to do it?

What is the final number?

What would the final number be if you used the numbers from 1 to 50?

1/14 Ratios, Testing and Solving Proportions

What is a ratio?

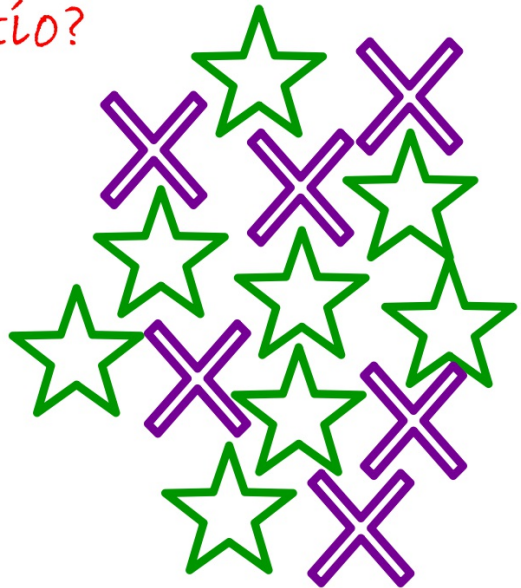
a comparison of 2 numbers/items

How do you write a ratio?

Stars to X's

8 : 6

8 to 6

$$\frac{8}{6}$$


If two ratios can both measure the same things, they are called equivalent.


"the same"

Reduce this!

$$\frac{3 \cdot 2}{4 \cdot 2} \text{ and } \frac{6}{8}$$

For every 3 x's, there are 4 stars.

2 groups of $\frac{3}{4}$



$$\frac{2}{3} \text{ and } ?? \frac{4 \text{ bill.}}{6 \text{ bill.}}, \frac{20}{30}, \frac{4}{6}, \frac{18}{27}, \frac{6}{9}, \frac{800 \text{ billion}}{1200 \text{ billion}}$$

↑
Thanks,
Owen!

Work with your partner and determine if these ratios are equivalent.

Be ready to explain why or why not.

$$\frac{5}{8} \cdot \frac{4}{4} \text{ and } \frac{20}{32}$$

Yes, there are 4 sets of the first to give you the second.

$$\frac{4}{5} \cdot \frac{3}{3} \rightarrow \frac{8}{15}$$

No, the #'s you multiply by are different.

$$\frac{3}{2} \cdot \frac{1}{3} = \frac{4}{6}$$

improper *Not improper*

No, you don't multiply top/bottom by the same #.

What does the variable have to equal in order for the ratios to be equivalent?

Scale #

$$\frac{3 \cdot 4}{8 \cdot 4} \text{ and } \frac{x}{32}$$

$$x = 12$$

$$\frac{4 \cdot 2}{b \cdot 2} \text{ and } \frac{8 \div 2}{20 \div 2}$$

$$b = 10$$

$$\frac{3 \cdot 3}{2 \cdot 3} \text{ and } \frac{9}{n}$$

$$n = 6$$

Solve each proportion...

$$\frac{3 \cdot 3}{8 \cdot 3} = \frac{x}{24}$$

$$x = 9$$

equivalent fractions

$$\frac{5 \cdot 4}{5 \cdot b} = \frac{5 \cdot 4}{6 \cdot 4}$$

$$\frac{5 \cdot b}{5} = \frac{24}{5}$$

$$5b = 24$$

$$b = 4\frac{4}{5}$$

$$\frac{10 \cdot 3}{10 \cdot 2} = \frac{10 \cdot 3}{n \cdot 3}$$

$$\frac{30}{20} = \frac{30}{n}$$

$$20 = \frac{3n}{3}$$

$$6\frac{2}{3} = n$$

$$\frac{3 \cdot c}{3 \cdot 6} = \frac{8 \cdot 2}{9 \cdot 2}$$

$$\frac{3c}{18} = \frac{16}{18}$$

$$3c = 16$$

$$c = 5\frac{1}{3}$$

HOMEWORK

Melon NSI

DUE Thurs.