

# 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

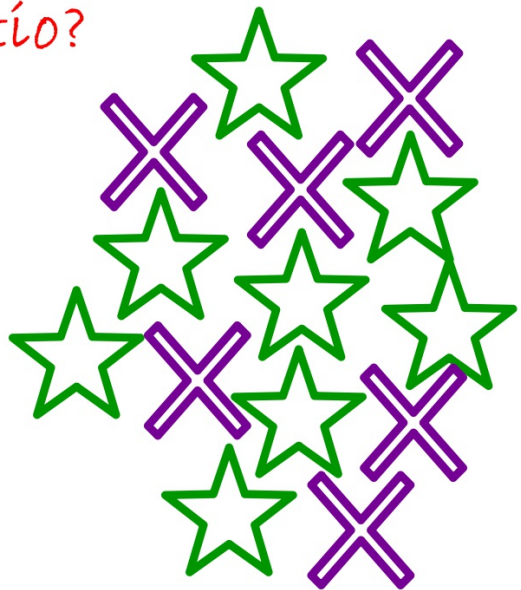
How do you write a ratio?

stars to X's

8 : 6

$\frac{8}{6}$

8 to 6



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

$\frac{3}{4}$  and  $\frac{6}{8}$   
for every 3 x's  
there are 4 ★'s



$\frac{2}{3}$  and ??  $\frac{4}{6}$ ,  $\frac{20}{30}$ ,  $\frac{200}{300}$ ,  $\frac{18}{27}$ ,  $\frac{48}{72}$   
 $\frac{1.2}{1.8}$

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

Be ready to explain why or why not.

$$\frac{5}{8} \cdot 4 = \frac{20}{32}$$

Yes because if you multiply by 4 on top + bottom you get the other side.

$$\frac{4}{5} \cdot 2 = \frac{8}{15}$$

No, you didn't times top + bottom by the same number and you should

Improper      Regular

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

No, because



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

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

$$12 = x$$

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

$$b = 10$$

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

$$n = 6$$

$$\frac{4}{k} = \frac{1.2^{10}}{1.5^{10}}$$

$$\frac{4 \cdot 3}{k \cdot 3} = \frac{12}{15}$$

$$\frac{3k}{3} = \frac{15}{3}$$

$$k = 5$$

Solve each proportion...

$$\frac{3 \cdot 3}{8 \cdot 3} = \frac{x}{24}$$
$$9 = x$$

$$\frac{5 \cdot 4}{5 \cdot b} = \frac{5 \cdot 4}{6 \cdot 4}$$
$$\frac{5b}{5} = \frac{24}{5}$$
$$b = 4\frac{4}{5}$$

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

$$\frac{20}{3} = \frac{30}{3}$$
$$6\frac{2}{3} = n$$

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

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

$$c = 5\frac{1}{3}, \text{ si?}$$

# HOMEWORK

Melon WS 1

Due Thursday