

# JANUARY 14, 2015

STARTER

5th  
6th

Add each. Answers should be in simplest form.

1.  $3\frac{1}{4} + 2\frac{3}{8}$

$$\begin{array}{r} 3\frac{1}{4} \cdot \frac{2}{2} \\ + 2\frac{3}{8} \cdot \frac{1}{1} \\ \hline 5\frac{5}{8} \end{array}$$

2.  $7\frac{2}{5} + 4\frac{1}{2}$

$$\begin{array}{r} 7\frac{2}{5} \cdot \frac{4}{4} \\ + 4\frac{1}{2} \cdot \frac{5}{5} \\ \hline 11\frac{9}{10} \end{array}$$

3.  $6\frac{5}{6} + 3\frac{3}{4}$

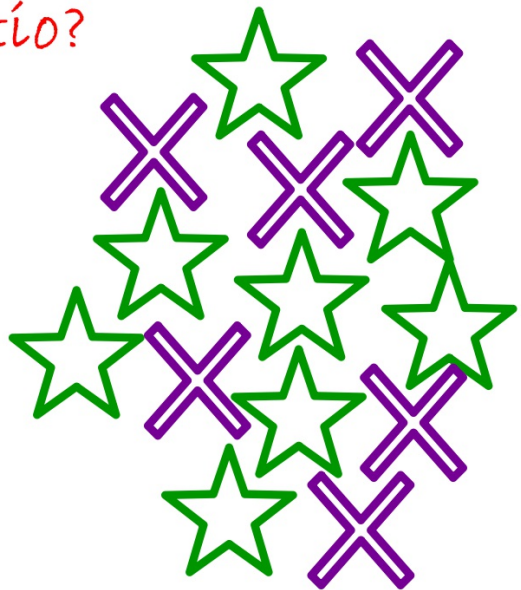
$$\begin{array}{r} 6\frac{5}{6} \cdot \frac{10}{10} \\ + 3\frac{3}{4} \cdot \frac{9}{9} \\ \hline 9\frac{19}{12} \\ 10\frac{7}{12} \end{array}$$

## 1/14 Ratios, Testing and Solving Proportions

What is a ratio?  
a comparison of two values

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"

Equivalent

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

for every 3 x's  
there are 4 ☆'s



$$\frac{2}{3} \text{ and } ?? \frac{4}{6}, \frac{6}{9}, \frac{12}{18}, \frac{20}{30}, \frac{80}{120}, \dots$$

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

Be ready to explain why or why not.

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

Yes, because you times the top & bottom by the same number.

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

No, because if you times them both by 2, top works but bottom doesn't.

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

No, because one is improper and the other is not.

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

Scale #'s

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

$$x = 12$$

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

$$b = 10$$

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

$$n = 6$$

Solve each proportion...

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

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

$$\begin{array}{r} 4 \\ 5 \overline{)24} \\ \underline{-20} \\ 4 \end{array}$$
$$4\frac{4}{5}$$

$$\frac{10 \cdot 3}{10 \cdot 2} = \frac{10 \cdot 3}{n \cdot 3}$$
$$\frac{20}{3} = \frac{30}{3}$$
$$6\frac{2}{3} = n$$

$$\frac{3 \cdot c}{3 \cdot 6} = \frac{8 \cdot 2}{9 \cdot 2}$$
$$\frac{3c}{3} = \frac{16}{3}$$
$$c = 5\frac{1}{3}$$

HOMEWORK

Yellow WS!

Due Friday