

Mrs. Withers is baking a cake, that feeds eight people, for her cousin's birthday party. Below is the recipe:

**one cup of milk
two cups of sugar
three cups of flour
four eggs, beaten**

**Mix thoroughly.
Bake at 350° until done**

• What's the comparison of:

1) milk to sugar?

2) sugar to eggs?

3) eggs to flour?

4) flour to eggs?

• Suppose Mrs. Withers wants to bake a cake for twenty-four people. What happens to the amounts of each ingredient? Explain.



**Topic:
Ratios &
Proportions**

Lesson Essential Question:

How can ratios and proportions help us with simple measurements?

What is are they?

RATIO
used to compare parts of a whole or to compare amounts.

PROPORTIONS
also know as equivalent ratios

Looks Like...

written in the order that is stated in the question.
sugar to milk = 2 to 1
eggs : flour = 4 : 3

compares two or more ratios at the same time.
$$\frac{\text{cups of flour } 3 \text{ cups}}{\text{cups of sugar } 2 \text{ cups}} = \frac{9 \text{ cups}}{x \text{ cups}}$$

What do I do?

Similar to fractions, ratios should be reduced (if possible)

Cross Multiply:
If the products are equal, then the ratios are in proportion.

Determine if the following are equivalent ratios.

$$\frac{2}{3} = \frac{10}{15}$$

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

Which of the following are equivalent ratios?

$$1) \frac{2}{5} = \frac{6}{10}$$

$$2) \frac{8}{10} = \frac{4}{5}$$

$$3) \frac{4}{9} = \frac{10}{22.5}$$

$$4) \frac{6}{4} = \frac{3}{2}$$

✓ **PROPORTION**
or
NOT X