

1 Solving Equations

- 1.1 Solving Simple Equations
- 1.2 Solving Multi-Step Equations
- 1.3 Solving Equations with Variables on Both Sides
- 1.4 Rewriting Equations and Formulas
- 1.5 Converting Units of Measure



What You Learned Before

Converting Measures

You find a recipe for wheat germ bread.

Example 1 How many cups of water do you need to make the recipe?

$$340 \text{ mL} \times \frac{1 \text{ cup}}{237 \text{ mL}} \approx 1.4 \text{ cups}$$

☘ You need about 1.4 cups of water to make the recipe.

Example 2 Do you need more whole wheat grains or more whole wheat flour?

$$400 \text{ grams} \times \frac{1 \text{ oz}}{28 \text{ grams}} \approx 14.3 \text{ oz of flour}$$

☘ Because 14.3 ounces $>$ $2\frac{3}{4}$ ounces, you need more whole wheat flour.

Adding and Subtracting Fractions

Example 3 How many teaspoons of spice (salt and cinnamon) are in the recipe?

$$\begin{aligned} \frac{3}{4} + \frac{1}{8} &= \frac{6}{8} + \frac{1}{8} \\ &= \frac{7}{8} \end{aligned}$$

☘ So, there is $\frac{7}{8}$ teaspoon of spice.

Example 4 How many more teaspoons of yeast than salt are in the recipe?

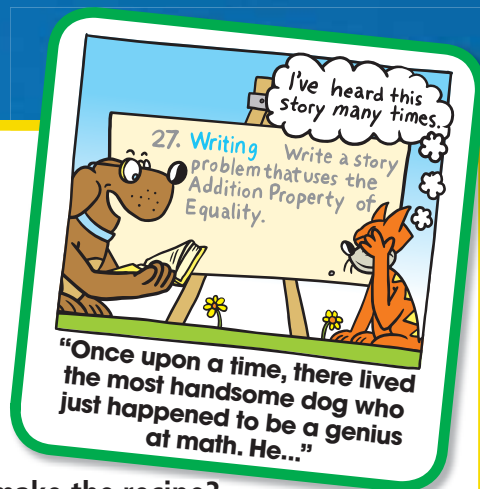
$$\begin{aligned} 1\frac{2}{3} - \frac{3}{4} &= \frac{5}{3} - \frac{3}{4} \\ &= \frac{20}{12} - \frac{9}{12} \\ &= \frac{11}{12} \end{aligned}$$

☘ So, there is $\frac{11}{12}$ teaspoon more yeast than salt.

Try It Yourself

Use the recipe to answer the questions.

1. You have one-quarter cup of orange juice. Do you have enough to make the recipe? Explain.
2. You have $\frac{1}{8}$ ounce of whole wheat grains. How many more ounces do you need to make the recipe?



WHEAT GERM BREAD

Preheat Oven to 220°C

Ingredients:

- $2\frac{3}{4}$ oz whole wheat grains
- 100 g wheat germ
- 400 g whole wheat flour
- $\frac{3}{4}$ tsp salt
- 340 mL water
- 60 mL orange juice
- 40 g honey
- $1\frac{2}{3}$ tsp yeast
- $\frac{1}{8}$ tsp cinnamon