Name _____ Date _____ Class _____

LESSON 4

Proportional Relationships

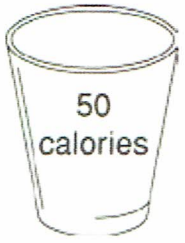
Reading Strategies: Use Graphic Aids

A **proportion** is a statement of two equal ratios. This statement is written as an equation.

One cup of juice contains 50 calories.

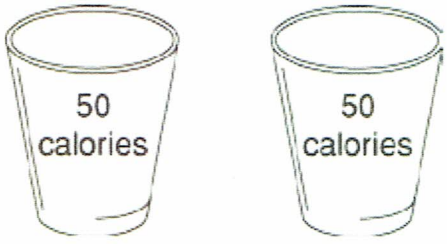
This statement can be written as a ratio.

$\frac{\text{cups}}{\text{calories}} \longrightarrow \frac{1}{50}$



Two cups of juice contain 100 calories.

This statement can also be written as a ratio. $\frac{\text{cups}}{\text{calories}} \longrightarrow \frac{2}{100}$



Are these two ratios equal?

Step 1: Write a proportion with the two ratios.

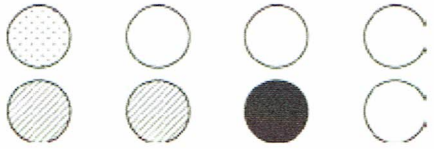
$\frac{1}{50} = \frac{2}{100} \longrightarrow$ Read: "1 is to 50 as 2 is to 100."

Step 2: Find the cross products. If cross products are equal, the ratios are equal and form a proportion.

$\frac{1}{50} \times \frac{2}{100}$ $2 \times 50 = 100$

$1 \times 100 = 100$

Use this picture to answer the questions.



1. What is the ratio of striped circles to total circles? _____

2. What is the ratio of black circles to white circles? _____

3. Find the cross products. Write = or ≠ to complete.

4. Do $\frac{2}{8}$ and $\frac{1}{4}$ form a proportion?