Number

Activity 10 Assessment

Solving Problems Involving Ratios, Rates, and Proportions

Solving Problems Involving Ratios, Rates, and Proportions			
Understands the difference between a ratio and a rate A ratio is a comparison of two quantities with the same units (e.g., 3 blue crayons to 5 green crayons). A rate is a comparison of two quantities with different units (e.g., 3 kg for $6, 100 km in 2 h).	Understands that ratios and rates are related by multiplication How can you determine a ratio equivalent to 3:7? Multiply each term by the same number, e.g., 3:7 = 6:14 How can you determine a rate equivalent to 70 heartbeats in 1 min? Multiply each quantity by the same number ,e.g., 140 heartbeats in 2 min.	Distinguishes between a ratio and a rate A recipe uses 30 g of sugar for every 2 cups dry ingredients. How many grams of sugar are in 1 cup? Does this problem involve a ratio or a rate? The problem involve a rate because the units are different.	Uses a variety of strategies to solve problems involving ratios, rates, and proportions. On a class trip, for every 3 students who skied, 2 snow-boarded. 64 students snow-boarded. How many students skied? Let s represent the number of students who skied. Use equivalent ratios. $s : 64 = 3 : 2$ (× 32 above, × 32 below) $s = 3 \times 32$ $s = 96$ Use a proportion. $\frac{s}{64} = \frac{3}{2}$ (× 32 above, × 32 below) $s = 3 \times 32$ $s = 96$ 96 students skied.
Observations/Documentation			