

Activity 19 Assessment

Applying Proportional Reasoning to Solve Problems

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Understands the concept of rate and unit rate

A rate is a comparison of two quantities with different units (e.g., 3 kg cost \$6, 100 km in 2 h).

Unit rate is the rate for one unit (e.g., \$2/kg, 50 km/h)

Understands that unit rate is proportional

The average speed of a cyclist is 25 km/h.
How far will the cyclist travel in 3 h?
Cyclist travels 25 km in 1 h.
So, in 3 h, cyclist travels:
 $3 \times 25 \text{ km} = 75 \text{ km}$

Solves a proportional problem involving percent

4 students in a class play hockey.
This is 20% of the class.
30% of the class play soccer.
How many students play soccer?

20% is 4 students.
So, 10% is 2 students.
And 30% is $3(2) = 6$ students

Uses a variety of strategies to solve problems involving ratios, rates, and percents

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.
Solve a proportion.

$$\frac{s}{64} = \frac{3}{2}$$

$$s = 3 \times 32$$

$$s = 96$$

96 students skied.

Observations/Documentation