

8th Grade Lesson 58

- I can apply knowledge of ratios to solve problems involving the distance formula.



Jimmy can drive 60 miles in 1 hour.

$$\frac{60 \text{ mi}}{1 \text{ hr.}}$$

$$\frac{1 \text{ hr}}{60 \text{ mi}}$$

60mph

How far can he drive in 2 hours?

$$\frac{\text{rate}}{60 \text{ mi}} \cdot \frac{\text{time}}{2 \text{ hr}} =$$

$$\frac{60 \text{ mi}}{1 \text{ hr.}} \cdot \frac{2 \text{ hr}}{1} =$$

120 mi
distance

Distance = rate \times time

$$\left(\frac{\text{distance}}{\text{time}} \right)$$

How long would it take Jimmy to drive 300 miles?

$$\frac{1 \text{ hr}}{60 \text{ mi}} \cdot \frac{300 \text{ mi}}{1} = 5 \text{ hr.}$$

rate • distance = time
 $\left(\frac{\text{time}}{\text{distance}} \right)$

Time = rate × distance

Helen could travel 40 miles per hour. How long would it take her to travel 600 miles?

$$\frac{1 \text{ hr}}{40 \text{ mi}} \cdot \frac{600 \text{ mi}}{1} = 15 \text{ hr.}$$

Harry could travel 350 miles in 7 hours.

What was his speed?

$$50 \text{ mph} \quad \frac{50 \text{ mi}}{1 \text{ hr}}$$

How long would it take him to travel 800 miles?

$$\frac{7 \text{ hr}}{350 \text{ mi}} \cdot 800 \text{ mi} = \frac{1 \text{ hr}}{50 \text{ mi}} \cdot 800 \text{ mi}$$

Rate · Distance = time

At the same speed, how far could he travel in 12 hours?

$$\frac{50 \text{ mi}}{1 \text{ hr}} \cdot 12 \text{ hr} = 600 \text{ mi}$$

Assignment

Problem Set 58

