

Appendix E&F: Speed Calculation Worksheet **Answer Key**

Directions: Solve each of the problems below. Your answer should be in miles per hour unless the problem says otherwise.

$$\text{Speed} = \text{Distance} / \text{Time}$$

1. A snail moves 20 inches in 3 hours. What is the speed of the snail?

$$v = \frac{x}{t} = \frac{20 \text{ in}}{3 \text{ hr}} = 6.67 \frac{\text{in}}{\text{hr}}$$

$$6.67 \frac{\text{in}}{\text{hr}} \times \left(\frac{\text{mile}}{63360 \text{ in}} \right) = 0.000105 \text{ mph}$$

2. If you sail for 9 hours on a river and travel 54 miles, how fast were you moving?

$$v = \frac{x}{t} = \frac{54 \text{ mi}}{9 \text{ hr}} = 6 \text{ mph}$$

3. My grandma loves going on roller coasters. She wants to go on the fastest coaster. Would she rather ride the coaster that goes 2 miles in 30 minutes or a coaster that moves 5 miles in 55 minutes? Why?

$$\text{Coaster 1: } v = \frac{x}{t} = \frac{2 \text{ mi}}{30 \text{ min}} \times \left(\frac{60 \text{ min}}{\text{hr}} \right) = 4.0 \text{ mph}$$

She would rather ride Coaster 2, because its average speed is faster than Coaster 1.

$$\text{Coaster 2: } v = \frac{x}{t} = \frac{5 \text{ mi}}{55 \text{ min}} \times \left(\frac{60 \text{ min}}{\text{hr}} \right) = 5.5 \text{ mph}$$

4. A man fell out of a tree that was 30 feet high. He hit the ground in 4 seconds. What was the speed at which he was falling? (answer in feet per second)

$$v = \frac{x}{t} = \frac{30 \text{ ft}}{4 \text{ s}} = 7.5 \frac{\text{ft}}{\text{s}}$$

5. If the mailman has to travel 34 miles a day and he works for 7 hours, what is his average speed?

$$v = \frac{x}{t} = \frac{34 \text{ mi}}{7 \text{ hr}} = 4.9 \text{ mph}$$