

Worksheet: Speed & Velocity Problems

(Frameworks Code)

Solve the following problems. Use correct problem set-up. Label all numbers with the correct units:

1. What is the average velocity of a car which travels 150 miles in 2.5 hours?

Given:
 $D = 150 \text{ miles}$
 $T = 2.5 \text{ hrs}$
 $V = ?$

Soln: $V = \frac{D}{T} = \frac{150 \text{ miles}}{2.5 \text{ hrs}}$

$$V = 60 \text{ miles/hr}$$

2. What is the average velocity of a car which travels 240 km in 1.3 hours?

Given:
 $V = ?$
 $D = 240 \text{ km}$
 $T = 1.3 \text{ hrs}$

Soln: $V = \frac{D}{T} = \frac{240 \text{ km}}{1.3 \text{ hrs}}$

$$V = 184.6 \text{ km/hr}$$

3. How far will a train go travelling 58 km/hr for 4.5 hours?

Given:
 $D = ?$
 $V = 58 \text{ km/hr}$
 $T = 4.5 \text{ hrs}$

Soln: $V = \frac{D}{T}$
 $D = V \cdot T$

$$D = (58 \text{ km/hr})(4.5 \text{ hrs})$$

$$D = 261 \text{ km}$$

4. How long will it take to travel 430 km travelling at a rate of 50 km/hr?

Given:
 $T = ?$
 $D = 430 \text{ km}$
 $V = 50 \text{ km/hr}$

Soln: $V = \frac{D}{T}$

$$T = \frac{D}{V} = \frac{430 \text{ km}}{50 \text{ km/hr}}$$

$$T = 8.6 \text{ hrs}$$

5. An object travels 120 mi in 2.2 hours. Find the average velocity.

Given:
 $D = 120 \text{ miles}$
 $T = 2.2 \text{ hours}$
 $V = ?$

Soln:
 $V = \frac{D}{T} = \frac{120 \text{ miles}}{2.2 \text{ hrs}}$

$$V = 54.5 \text{ miles/hr}$$

6. A car travelling at 53 km/hr will travel ___ km in 3.5 hours.

Given:
 $V = 53 \text{ km/hr}$
 $D = ?$
 $T = 3.5 \text{ hrs}$

Soln:
 $V = \frac{D}{T}$
 $D = T \cdot V$

$$D = (53 \text{ km/hr})(3.5 \text{ hrs})$$

$$D = 185.5 \text{ km}$$

7. A family travels 525 miles in 10 hours of driving. Find the average velocity.

Given:
 $D = 525 \text{ miles}$
 $T = 10 \text{ hr}$
 $V = ?$

Soln: $V = \frac{D}{T} = \frac{525 \text{ miles}}{10 \text{ hrs}}$

$$V = 52.5 \text{ miles/hr}$$