## **Practice Problems**

## Examples

What is the average speed of a cheetah that traveled 115.0 m in 4.0 s?

$$average \ speed = \frac{distance}{time}$$

$$average \ speed = \frac{115.0 \ m}{4.0 \ s}$$

$$average \ speed = 28.8 \ m/s$$

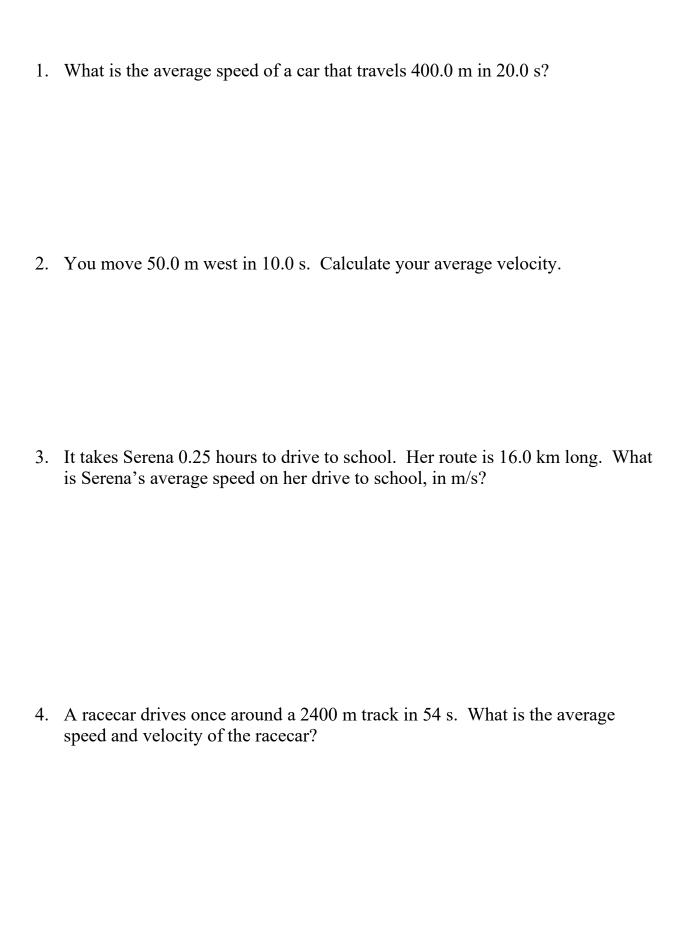
A car travels with an average velocity of 25.0 m/s north. What is the displacement of the car in 60.0 s?

$$average \ velocity = \frac{displacement}{time}$$
 
$$25.0 \ m/s = \frac{displacement}{60.0 \ s}$$
 
$$displacement = (25.0 \ m/s) \times (60.0 \ s)$$
 
$$displacement = 1500 \ m \ north$$

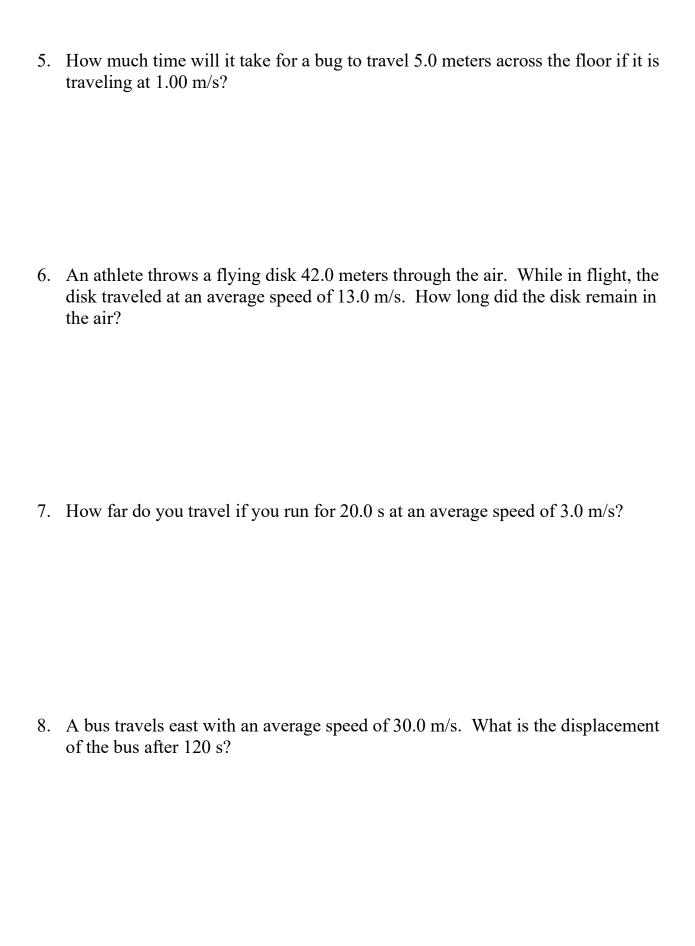
Jeffrey is on his skateboard and starts skating down a ramp. After 10.0 s he has a speed of 20.0 m/s. What was his acceleration?

$$acceleration = \frac{final\ velocity\ -\ initial\ velocity}{time}$$
 
$$acceleration = \frac{20.0\ m/s\ -\ 0.0\ m/s}{10.0\ s}$$
 
$$acceleration = 2.00\ m/s^2$$

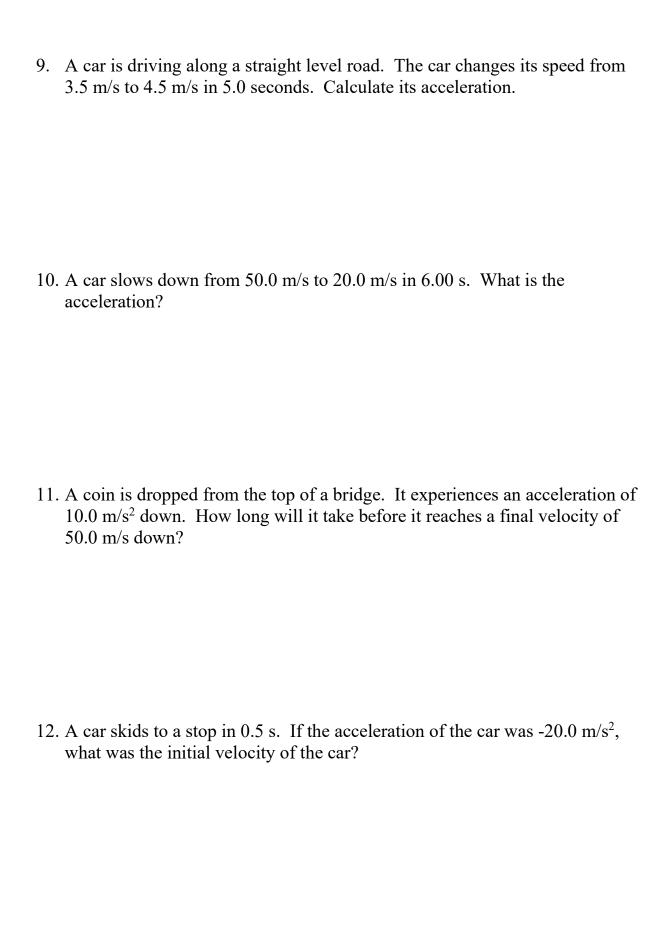
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