

1. You travel on Route 66 at an average rate of 40 miles per hour for three hours. How far did you travel? (Hint: use  $d = rt$ )

$$d = rt$$

$$d = 40 \cdot 3 = 120$$

$$120 \text{ miles}$$

2. You travel on the I-5 freeway at an average rate of 60 miles per hour. How long would it take to travel 1860 miles? (Hint: use  $d = rt$ )

$$d = rt$$

$$1860 = 60 \cdot t$$

$$t = \frac{1860}{60} = 31$$

$$31 \text{ hours}$$

3. Calculate the voltage (in volts) in a circuit that has resistance of 20 ohms and a current of  $-12$  amps. (Hint: use  $V = ir$ )

$$V = ir$$

$$V = -12 \cdot 20 = -240$$

$$-240 \text{ V}$$

4. The voltage in a circuit is  $-120$  V and the current is  $-3$  amps. What is the resistance (in ohms)? (Hint: use  $V = ir$ )

$$V = ir$$

$$-120 = -3 \cdot r$$

$$r = \frac{-120}{-3} = 40$$

$$40 \Omega \text{ (or 40 ohms)}$$

5. Suppose you put \$1200 down to buy a car. You make 10 payments of \$350 and spend \$2500 in maintenance and repairs. Four years after paying off the car, you sell it for \$4400. What is your net? Is it a profit or a loss? (Recall:  $N = R - C$ )

$$R = 4400$$

$$C = 1200 + 10 \cdot 350 + 2500$$

$$= 1200 + 3500 + 2500$$

$$= 7200$$

$$N = R - C$$

$$= 4400 - 7200$$

$$= -2800$$

Net is  $-\$2800$   
This is a  $\text{loss.}$

Q: What has three feet but no legs or arms?