

8) 60 miles per hour into meters per second

$$\frac{60 \text{ mi}}{1 \text{ hr}} \cdot \frac{5,280 \text{ ft}}{1 \text{ mi}} \cdot \frac{1 \text{ m}}{3.28 \text{ ft}} \cdot \frac{1 \text{ hr}}{60 \text{ min}} \cdot \frac{1 \text{ min}}{60 \text{ sec}} \approx 26.829 \text{ m/sec}$$

9) 130 meters per second into miles per hour

$$\frac{130 \text{ m}}{1 \text{ sec}} \cdot \frac{3.28 \text{ ft}}{1 \text{ m}} \cdot \frac{1 \text{ mi}}{5,280 \text{ ft}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ hr}} \approx 290.727 \text{ mi/hr}$$

10) 1100 feet per second into miles per hour

$$\frac{1100 \text{ ft}}{1 \text{ sec}} \cdot \frac{1 \text{ mi}}{5,280 \text{ ft}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ hr}} \approx 750 \text{ mi/hr}$$

11) 53 yards per hour into inches per week

$$\frac{53 \text{ yd.}}{1 \text{ hr}} \cdot \frac{3 \text{ ft}}{1 \text{ yd}} \cdot \frac{12 \text{ in}}{1 \text{ ft}} \cdot \frac{24 \text{ hr}}{1 \text{ day}} \cdot \frac{7 \text{ days}}{1 \text{ week}} = 320,544 \text{ in/wk}$$

*12) 721 lbs per week into kg per second

$$\frac{721 \text{ lbs}}{1 \text{ week}} \cdot \frac{1 \text{ kg}}{2.2 \text{ lbs}} \cdot \frac{1 \text{ week}}{7 \text{ days}} \cdot \frac{1 \text{ day}}{24 \text{ hr}} \cdot \frac{1 \text{ hr}}{60 \text{ min}} \cdot \frac{1 \text{ min}}{60 \text{ sec}} \approx 0.000542 \text{ kg/sec}$$

13) 88 inches per second into miles per day

$$\frac{88 \text{ in}}{1 \text{ sec}} \cdot \frac{1 \text{ ft}}{12 \text{ in}} \cdot \frac{1 \text{ mi}}{5,280 \text{ ft}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ hr}} \cdot \frac{24 \text{ hr}}{1 \text{ day}} = 120 \text{ mi/day}$$

14) 12080 gallons per month into liters per hour

$$\frac{12,080 \text{ gal}}{1 \text{ month}} \cdot \frac{4 \text{ qt.}}{1 \text{ gal}} \cdot \frac{0.946 \text{ L}}{1 \text{ qt.}} \cdot \frac{1 \text{ month}}{30.42 \text{ days}} \cdot \frac{1 \text{ days}}{24 \text{ hr}} \approx 62.611 \text{ L/hr}$$

15) 27 miles per gallon into kilometers per liter

$$\frac{27 \text{ mi}}{1 \text{ gal}} \cdot \frac{1 \text{ km}}{0.62 \text{ mi}} \cdot \frac{1 \text{ gal}}{4 \text{ qt.}} \cdot \frac{1 \text{ qt.}}{0.946 \text{ L}} \approx 11.509 \text{ km/L}$$

16) 186,282 miles per second into meters per second

$$\frac{186,282 \text{ mi}}{1 \text{ sec}} \cdot \frac{5,280 \text{ ft}}{1 \text{ mi}} \cdot \frac{1 \text{ m}}{3.28 \text{ ft}} = 299,808,585.4 \text{ m/sec}$$

FOR #14

NOTE: $\frac{365}{12} \approx 30.42$ days in an average month for a regular year