

Multiple Conversions Notes

Name: _____ Date: _____

Directions: Convert each number to its indicated unit.

1. 30 feet per second to inches per minutes

$$\frac{30 \text{ ft}}{1 \text{ sec}} \cdot \frac{12 \text{ in}}{1 \text{ ft}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} = \boxed{21,600 \frac{\text{in}}{\text{min}}}$$

2. 12 gallons per 5 pounds to pints per ounces

$$\frac{12 \text{ gal}}{5 \text{ lb}} \cdot \frac{4 \text{ qt}}{1 \text{ gal}} \cdot \frac{2 \text{ pt}}{1 \text{ qt}} \cdot \frac{1 \text{ lb}}{16 \text{ oz}} = \frac{96}{80} = \boxed{1.2 \frac{\text{pt}}{\text{oz}}}$$

3. 4000 ounces per 80 meters to pounds per cm

$$\frac{4000 \text{ oz}}{80 \text{ m}} \cdot \frac{1 \text{ lb}}{16 \text{ oz}} \cdot \frac{1 \text{ m}}{100 \text{ cm}} = \frac{4000}{128,000} = \boxed{.031 \frac{\text{lb}}{\text{cm}}}$$

4. 72 yards per 700 seconds to feet per hours

$$\frac{72 \text{ yd}}{700 \text{ sec}} \cdot \frac{3 \text{ ft}}{1 \text{ yd}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ hr}} = \frac{777,600}{700} = \boxed{1,110.86 \frac{\text{ft}}{\text{hr}}}$$

5. 40 days per 8.6km to seconds per mm

$$\frac{40 \text{ days}}{8.6 \text{ km}} \cdot \frac{24 \text{ hr}}{1 \text{ day}} \cdot \frac{60 \text{ min}}{1 \text{ hr}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} \cdot \frac{1 \text{ km}}{1000 \text{ m}} \cdot \frac{1 \text{ m}}{1000 \text{ mm}} = \frac{3456000}{8600000}$$

$$\boxed{.40 \text{ sec/mm}}$$

6. 14.8 minutes per 2 cups to seconds per pint

$$\frac{14.8 \text{ min}}{2 \text{ c}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} \cdot \frac{2 \text{ pt}}{1 \text{ pt}} = \frac{1776}{2} = \boxed{888 \frac{\text{sec}}{\text{pt}}}$$