

# Multiple Conversions Notes

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Directions: Convert each number to its indicated unit.

1. 30 feet per second to inches per minutes  $\frac{ft}{sec} \rightarrow \frac{in}{min}$

$$\frac{30 \cancel{ft}}{1 \cancel{sec}} \times \frac{12 \text{ (in)}}{1 \cancel{ft}} \times \frac{60 \cancel{sec}}{1 \text{ (min)}} = 21,600 \frac{in}{min}$$

2. 12 gallons per 5 pounds to pints per ounces  $\frac{gal}{lb} \rightarrow \frac{pt}{oz}$

$$\frac{12 \cancel{gal}}{5 \cancel{lb}} \times \frac{4 \cancel{qt}}{1 \cancel{gal}} \times \frac{2 \text{ (pt)}}{1 \cancel{qt}} \times \frac{1 \cancel{lb}}{16 \text{ (oz)}} = \frac{96}{80} = 1.2 \frac{pt}{ounces}$$

3. 4000 ounces per ~~80 meters~~ to pounds per cm

K H D B D C M  
                  ↑ → 8000

$$\frac{4000 \cancel{oz}}{8000 \cancel{m}} \times \frac{1 \text{ (lb)}}{16 \cancel{oz}} = \frac{4000}{128,000} = 0.03 \frac{lb}{cm}$$

4. 72 yards per 700 seconds to feet per hours  $\frac{yd}{sec} \rightarrow \frac{ft}{hour}$

$$\frac{72 \cancel{yd}}{700 \cancel{sec}} \times \frac{3 \text{ (ft)}}{1 \cancel{yd}} \times \frac{60 \cancel{sec}}{1 \cancel{min}} \times \frac{60 \cancel{min}}{1 \text{ (hr)}} = \frac{777,600}{700} = 1110.86 \frac{ft}{hr}$$

5. ~~8.6 km~~ per 40 days to mm per second

K H D B D C M  
                  ↓ 8.600000

$$\frac{8,600,000 \cancel{mm}}{40 \cancel{days}} \times \frac{1 \cancel{days}}{24 \cancel{hr}} \times \frac{1 \cancel{hr}}{60 \cancel{min}} \times \frac{1 \cancel{min}}{60 \cancel{sec}} = \frac{8,600,000}{3,456,000} = 2.49 \frac{mm}{sec}$$

6. 2 cups per 14 minutes to pints per seconds

200 meters per 19.19 sec to miles per hour

$$1 \text{ meter} = 3.28 \text{ ft}$$

$$\frac{200 \cancel{m}}{19.19 \cancel{sec}} \times \frac{3.28 \cancel{ft}}{1 \cancel{m}} \times \frac{1 \text{ (mi)}}{5280 \cancel{ft}} \times \frac{60 \cancel{sec}}{1 \cancel{min}} \times \frac{60 \cancel{min}}{1 \text{ (hr)}} = 23.3 \frac{mi}{hr}$$