

Multiple Unit Conversion

Name:

Directions: Use dimensional analysis to solve each problem. SHOW WORK FOR CREDIT!!!!!!

$$1 \text{ km} = 1000 \text{ m}$$

$$1 \text{ m} = 100 \text{ cm}$$

$$1 \text{ m} = 1000 \text{ mm}$$

$$1 \text{ cm} = 10 \text{ mm}$$

(Good for g, m, L)

$$60 \text{ s} = 1 \text{ min}$$

$$60 \text{ min} = 1 \text{ hr}$$

$$24 \text{ hr} = 1 \text{ day}$$

$$365 \text{ day} = 1 \text{ yr}$$

$$1.637 \text{ km} = 1 \text{ mi}$$

$$1 \text{ m}^2 = 1,000,000 \text{ mm}^2$$

$$1 \text{ J} = .239 \text{ cal}$$

1. 0.150 km/s to mi/hr

2. 3.872 kg/m^2 to mg/mm^2

3. $17.23 \times 10^6 \text{ g/mL}$ to mg/L

4. 140.0 J/s to cal/yr