Worksheet #2: Metric Conversions **Name**_____*KEY*_____

1. 32 cm to m

$$? \text{ m} = 32 \text{ cm} \times \frac{1 \text{ m}}{100 \text{ cm}} = \boxed{3.2 \times 10^{-1} \text{ m}}$$

2. 56 mL to cm

$$? \text{ cm}^3 = 56 \text{ mL} \times \frac{1 \text{ cm}^3}{1 \text{ mL}} = \boxed{5.6 \times 10^{1} \text{ cm}^3}$$

3. 14 minutes to seconds

$$? \text{ s} = 14 \text{ min} \times \frac{60 \text{ s}}{1 \text{ min}} = \boxed{8.4 \times 10^{2} \text{ s}}$$

4. 507 cL to L

$$? \text{ L} = 507 \text{ cL} \times \frac{1 \text{ L}}{100 \text{ cL}} = \boxed{5.07 \times 10^{0} \text{ L}}$$

5. 29 kg to cg

$$? \text{ cg} = 29 \text{ kg} \times \frac{1000 \text{ g}}{1 \text{ kg}} \times \frac{100 \text{ cg}}{1 \text{ g}} = \boxed{2.9 \times 10^{6} \text{ cg}}$$

6. 0.546 km to μm

$$? \text{ μm} = 0.546 \text{ km} \times \frac{1000 \text{ m}}{1 \text{ km}} \times \frac{1{,}000{,}000 \text{ μm}}{1 \text{ m}} = \boxed{5.46 \times 10^{8} \text{ μm}}$$

7. 69,000 dg to kg

$$? \text{ kg} = 69{,}000 \text{ dg} \times \frac{1 \text{ g}}{10 \text{ dg}} \times \frac{1 \text{ kg}}{1000 \text{ g}} = \boxed{6.9 \times 10^{0} \text{ kg}}$$

8. 23 gallons to mL (Hint: 1 fluid oz = 33 mL)

$$? \text{ mL} = 23 \text{ gal} \times \frac{4 \text{ qt}}{1 \text{ gal}} \times \frac{2 \text{ pt}}{1 \text{ qt}} \times \frac{2 \text{ cups}}{1 \text{ pt}} \times \frac{8 \text{ fl oz}}{1 \text{ cup}} \times \frac{33 \text{ mL}}{1 \text{ fl oz}} = \boxed{9.7 \times 10^{4} \text{ mL}}$$

**this is a good problem to remind students how difficult it is to remember the English system*