

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

C1 Chemistry I: ☐ A block ☐ C block ☐ D block

## Unit Conversions #2

Perform each of the following conversions. A list of conversion factors is given on the back of this worksheet.

1.  $1.85 \text{ m} = \text{_____ cm}$

6.  $32 \frac{\text{mi.}}{\text{gal.}} = \text{_____ } \frac{\text{km}}{\ell}$

2.  $750. \mu\ell = \text{_____ mL}$

7.  $36 \text{ in.} = \text{_____ cm}$

3.  $1.25 \times 10^{-4} \text{ s} = \text{_____ ms}$

8.  $105 \text{ kg} = \text{_____ lb.}$

4.  $0.0537 \text{ mol} = \text{_____ } \mu\text{mol}$

9.  $100 \frac{\text{km}}{\text{hr.}} = \text{_____ } \frac{\text{mi.}}{\text{min.}}$

5.  $2.65 \frac{\text{dollars}}{\text{gal.}} = \text{_____ } \frac{\text{cents}}{\ell}$

10.  $2.75 \frac{\text{g}}{\text{cm}^3} = \text{_____ } \frac{\text{kg}}{\text{m}^3}$

## Conversion Factors

Conversions with an “is identical with” sign ( $\equiv$ ) are exact (infinitely precise). Conversions with an equals sign ( $=$ ) are precise to the number of significant figures given.

$$1.000 \text{ gal.} = 3.785 \ell$$

$$1.00 \text{ mi.} = 1.61 \text{ km}$$

$$1 \text{ in.} \equiv 2.54 \text{ cm} \qquad (1 \text{ in.})^3 \equiv (2.54 \text{ cm})^3 \qquad 1 \text{ in.}^3 \equiv 2.54^3 \text{ cm}^3$$

$$1 \text{ ft.} \equiv 12 \text{ in.} \qquad (1 \text{ ft.})^3 \equiv (12 \text{ in.})^3 \qquad 1 \text{ ft.}^3 \equiv 12^3 \text{ in.}^3$$

$$1.00 \text{ lb.} = 454 \text{ g}$$

$$1 \text{ hr.} \equiv 60 \text{ min.}$$

$$1 \text{ min.} \equiv 60 \text{ s}$$