

Name: _____

Chemistry Homework: Derived Units and Volume

1. Perform the following Conversions:

a) $56 \text{ ml} = \underline{\hspace{2cm}} \text{ L}$

b) $0.8 \text{ dm}^3 = \underline{\hspace{2cm}} \text{ cm}^3$

c) $900 \text{ mL} = \underline{\hspace{2cm}} \text{ cm}^3$

d) $35 \text{ mg} = \underline{\hspace{2cm}} \text{ g}$

e) $65\,000 \text{ cm}^3 = \underline{\hspace{2cm}} \text{ L}$

f) $28 \text{ L} = \underline{\hspace{2cm}} \text{ mL}$

g) $212 \text{ mmol} = \underline{\hspace{2cm}} \text{ mol}$

h) $570 \text{ }\mu\text{m} = \underline{\hspace{2cm}} \text{ mm}$

i) $4 \text{ dm}^3 = \underline{\hspace{2cm}} \text{ mL}$

j) $0.13 \text{ mol} = \underline{\hspace{2cm}} \text{ mmol}$

k) $0.50 \text{ mL} = \underline{\hspace{2cm}} \text{ dm}^3$

l) $200 \text{ mm} = \underline{\hspace{2cm}} \text{ m}$

m) $2 \times 10^2 \text{ Ms} = \underline{\hspace{2cm}} \text{ }\mu\text{s}$

n) $30000 \text{ ml} = \underline{\hspace{2cm}} \text{ L}$

o) $0.46 \text{ dm}^3 = \underline{\hspace{2cm}} \text{ cm}^3$

p) $2.6 \times 10^5 \text{ dm}^3 = \underline{\hspace{2cm}} \text{ L}$

q) $4.0 \times 10^6 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$

r) $0.0125 \text{ dm}^3 = \underline{\hspace{2cm}} \text{ m}$

2. Rank from smallest to largest:

a.) A.) 200 mL B.) 0.500 dm^3 C.) 1 L D.) 10 cm^3 _____

b.) A.) 5200 cm^3 B.) 625 ml C.) $3 \times 10^{-1} \text{ dm}^3$ D.) 0.02 L _____

c.) A.) 0.25 ml B.) $3.0 \times 10^3 \text{ cm}^3$ C.) 25 L D.) 0.05 dm^3 _____

3. Calculate the following. Use scientific notation when appropriate. Remember units!

a.) $25 \text{ cm} \times 4.1 \text{ cm} \times 0.2 \text{ cm} =$

b.) $(0.0557 \text{ g} + 0.0865 \text{ g}) / 2.0 \times 10^{-2} \text{ s}$

c.) $4.67 \text{ g} / (3.0 \text{ cm} \times 2.4 \text{ cm} \times 0.002 \text{ cm})$

d.) $(5. \times 10^5 \text{ kg} \times 2.6 \text{ N}) / (7.1 \times 10^4 \text{ m} \times 3.0 \times 10^2 \text{ m})$

e.) $(0.13 \text{ mol} + 0.22 \text{ mol}) / (.24 \text{ dm} \times .83 \text{ dm} \times .31 \text{ dm})$