

Practice Problems

A. How many significant figures are there in each of the following?

1. 0.006030 g 4

2. 200.0 mL 4

3. 56.90 g 4

4. 5690 mL 4

B. Convert to Scientific Notation and give the number of significant figures.

1. 0.000450 mL 4.50×10^{-4} mL 3

2. 2009.00 g 2.00900×10^3 g 6

3. 23000000 L 2.3×10^7 L 2

4. 0.0000000034 g 3.4×10^{-9} g 2

C. Convert to standard notation and give the number of significant figures.

1. 6.02×10^4 mL 60,200 mL 3

2. 2.90×10^{-6} L 0.00000290 L 3

3. 6.700×10^3 g 6700 g 4

4. 0.023×10^{-2} L 0.00023 L 2

D. Find the mass of 2.300 moles of NaCl.

$2.300 \text{ mol} \times \frac{58.5 \text{ g}}{1 \text{ mol}} = 135 \text{ g of NaCl}$

E. What mass of water would you expect to get if you combust 35.0 grams of methane (CH₄) gas?

