Chemistry 11
Worksheet on Significant Digits

Determine the number of significant digits in each of the following:

1) 5.432 g
2) 40.319 g
3) 146 cm^3
4) 3.284 cm
5) 0.189 kg
6) 429.3 g
7) 2 873.0 cm^3
8) 99.9 mL
9) 0.000 235 g
10) 144 L
11) 2500 cm
12) 2 500.0 g
13) 1.04×10^{14} g
14) 3.58×10^{-9} m
15) 48.571 93 m^3
16) 0.002 300 mg
17) 300 000 240. km
18) 450 003.400 L
19) 7.500 mg
20) 1.000 g
21) 3.92×10^{-3} g
22) 1 003 L

Add or subtract the following as indicated, remembering the rules for significant digits.

23) 12 cm + 0.031cm + 7.969 cm =
24) 3.419 g + 3.912 g + 7.0518 g + 0.000 13 g =
25) 0.085 cm + 0.062 cm + 0.14 cm =
26) 143.0 cm + 289.25 cm + 7.051 8 cm =
27) 30.5 g + 16.82 g + 41.07 g + 85.219 g =
28) 29.49 cm + 83.46 cm + 107.05 cm + 26.617 cm =
29) 0.065 3 g + 0.08538 g + 0.076 54 g + 0.043 2 g =
30) 63.489 mL + 126.1 mL + 68.85 mL + 12.05 mL =
31) 41.025 cm – 23.28 cm =
32) 289 g – 43.7 g =
33) 145.63 mL – 28.9 mL =
34) 62.47 g – 39.9 g =
35) 40.008 mL – 29.094 1 mL =

Multiply or divide as directed, rounding off to the proper number of significant digits. Remember to include the proper unit of the answer.

36) 2.89 cm x 4.01 cm =
37) 17.3 cm x 6.2 cm =
38) 3.08 m x 1.2 m =
39) 5.00 mm x 7.321 6 mm =
40) 20.8 dm x 123.1 dm =
41) 5 cm x 5 cm =
42) 5.0 cm x 5 cm =
43) 5.0 cm x 5.0 cm =
44) 4.218 cm x 6.5 cm =
45) 150.0 m x 4.00 m =
46) 282.2 km x 3.0 km =
47) 8.071 $cm^2 \div 4.216$ cm =
48) 109.375 8 $m^2 \div 5.813$ m =
49) 24 789.4 $km^2 \div 43.5$ km =
50) 6.058 $mm^2 \div 0.85$ mm =
51) 4.819 $cm^2 \div 9.852$ cm =
52) 139.482 $m^2 \div 68.75$ m =
53) 4.23 $m^2 \div 18.941$ m =

54) $0.057 \text{ mL} \times \frac{760 \text{ mm}}{740 \text{ mm}} \times \frac{273 \text{ K}}{250 \text{ K}} =$

55) $142.0 \text{ mL} \times \frac{745 \text{ mm}}{785 \text{ mm}} \times \frac{300.0 \text{ K}}{295 \text{ K}} =$

56) $51.3 \times \frac{44.962 \text{ amu}}{115.874 \text{ amu}} =$