

Answer Key

Significant Figures Worksheet

1) Determine the number of significant figures in each of the following:

a) 4 75.02 mm

d) 2 0.0049 g

b) 4 18.90 mL

e) 2 150 cm

c) ∞ 12 test tubes

f) 3 150. Cm

2) Re-write the quantity 827,000,000,000,000 picoseconds to show:

a) 1 sig. fig. 8×10^{14} ps

b) 2 sig. figs. 8.3×10^{14} ps

c) 3 sig. figs. 827×10^{14} ps

d) 4 sig. figs. 8.270×10^{14} ps

e) 5 sig. figs. 8.2700×10^{14} ps

3) Rewrite the quantity 0.0031904 kg to show:

a) 1 sig. fig. 3×10^{-3} kg

b) 2 sig. figs. 3.2×10^{-3} kg

c) 3 sig. figs. 3.19×10^{-3} kg

4) Round each of the following to 3 significant figures:

a) 16.8477 L 16.8 L

b) 5.6732 5.67

c) 0.14986 L 0.150 L

d) 861.85 862

e) 4.203×10^4 km 4.20×10^4 km

f) 5.0981×10^{-3} 5.10×10^{-3}

g) 0.00318756 m 3.19×10^{-3} m

h) 0.09025011 0.0903

5) Perform the following calculations and report the results with the correct number of significant figure and proper units.

$$\begin{array}{r} 0.0677 \\ 48.1 \\ +82.7655 \\ \hline 130.9332 \end{array}$$

↓

130.9

$$\begin{array}{r} 43.8316 \\ - 29.5706 \\ \hline 14.261 \end{array}$$

↓

14.2610

$$\frac{8506 \times 0.02}{6.524} = 26.076026 \dots$$

↓

30

$$0.0222 \times 0.7000 \times 8.702 = 0.13522908 \dots$$

↓

0.135