

Significant Figures Worksheet

Significant Figures

1. Indicate how many significant figures there are in each of the following measured values.

- a) 246.32 _____ b) 1.008 _____ c) 700000 _____
d) 107.854 _____ e) 0.00340 _____ f) 350.670 _____
g) 100.3 _____ h) 14.600 _____ i) 1.0000 _____
j) 0.678 _____ k) 0.0001 _____ l) 320001 _____

2. Calculate the answers to the appropriate number of significant figures.

$$\begin{array}{r} \text{a) } 32.567 \\ 135.0 \\ + 1.4567 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b) } 246.24 \\ 238.278 \\ + 98.3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c) } 658.0 \\ 23.5478 \\ + 1345.29 \\ \hline \end{array}$$

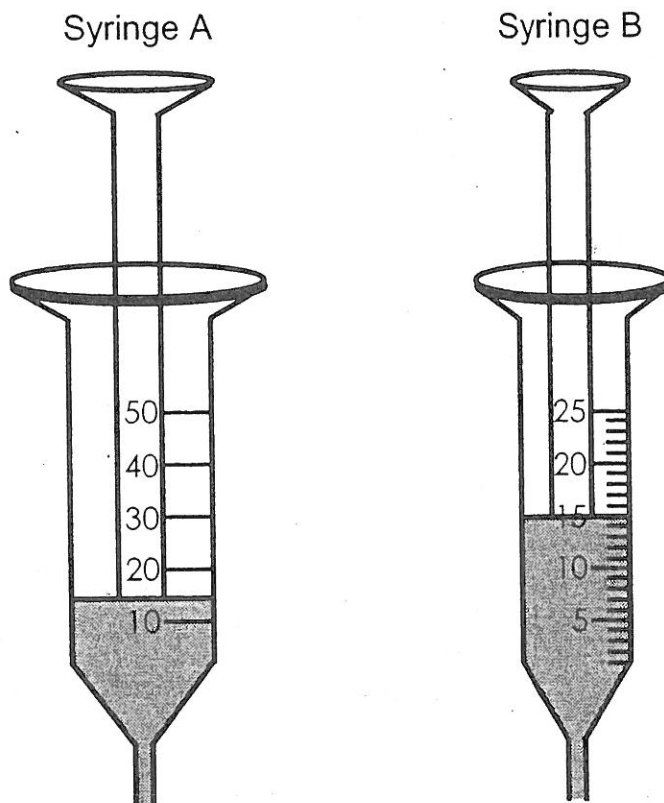
3. Calculate the answers to the appropriate number of significant figures.

- a) $23.7 \times 3.8 =$ _____ f) $1.678 / 0.42 =$ _____
b) $45.76 \times 0.25 =$ _____ g) $28.367 / 3.74 =$ _____
c) $81.04 \text{ g} \times 0.010 =$ _____ h) $4278 / 1.006 =$ _____
d) $6.47 \times 64.5 =$ _____ i) $(6.8 + 4.7) \times 17.44 =$ _____
e) $43.678 \times 64.1 =$ _____ j) $(320. - 22.7) \times 3.8 =$ _____
k) $\frac{(14.86 + 13.7) \times (65.346 - 4.10)}{(43.888 - 32.888)} =$ _____

Measurement

Question 4

Below is a diagram of two syringes used to collect gases. The gases are represented by the shaded portion in the syringe.



Indicate the volume of each gas as measured by the two syringes.

Observe the conventions regarding significant figures, and give the uncertainty of the measurement.