

Significant Figures Worksheet

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

246.32	_____	1.008	_____	700000	_____
107.854	_____	0.00340	_____	350.670	_____
100.3	_____	14.600	_____	1.0000	_____
0.678	_____	0.0001	_____	320001	_____

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

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

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

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

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

a) $23.7 \times 3.8 =$ _____ e) $43.678 \times 64.1 =$ _____

b) $45.76 \times 0.25 =$ _____ f) $1.678 / 0.42 =$ _____

c) $81.04 \text{ g} \times 0.010 =$ _____ g) $28.367 / 3.74 =$ _____

d) $6.47 \times 64.5 =$ _____ h) $4278 / 1.006 =$ _____

4. $(12.01 - 11.59) / 36.1 =$

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5. Calculate the density of an object that has a mass of 23.0 g and the volume is found by water displacement. The water level starts at 5.05 mL and after the object is put in, has a water level of 11.3 mL.

Significant Figures Worksheet Key

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

246.32	<u>5 sig figs</u>	1.008	<u>4 sig figs</u>	700000	<u>1 sig fig</u>
107.854	<u>6 sig figs</u>	0.00340	<u>3 sig figs</u>	350.670	<u>6 sig figs</u>
100.3	<u>4 sig figs</u>	14.600	<u>5 sig figs</u>	1.0000	<u>5 sig figs</u>
0.678	<u>3 sig figs</u>	0.0001	<u>1 sig fig</u>	320001	<u>6 sig figs</u>

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

$$\begin{array}{r} 32.567 \\ 135.0 \\ + 1.4567 \\ \hline \mathbf{169.0} \end{array}$$

$$\begin{array}{r} 246.24 \\ 238.278 \\ + 98.3 \\ \hline \mathbf{582.8} \end{array}$$

$$\begin{array}{r} 658.0 \\ 23.5478 \\ + 1345.29 \\ \hline \mathbf{2026.8} \end{array}$$

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

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|-----------------------------------|-------------------------------------|-------------------------|-------------------------------------------------|
| a) 23.7×3.8 | = <u>$\mathbf{90.}$</u> | e) 43.678×64.1 | = <u>$\mathbf{2.80 \times 10^3}$</u> |
| b) 45.76×0.25 | = <u>$\mathbf{11}$</u> | f) $1.678 / 0.42$ | = <u>$\mathbf{4.0}$</u> |
| c) $81.04 \text{ g} \times 0.010$ | = <u>$\mathbf{0.81}$</u> | g) $28.367 / 3.74$ | = <u>$\mathbf{7.58}$</u> |
| d) 6.47×64.5 | = <u>$\mathbf{417}$</u> | h) $4278 / 1.006$ | = <u>$\mathbf{4252}$</u> |