

## Significant Figures Worksheet

# Significant Figures

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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)  $23.7 \times 3.8 =$  \_\_\_\_\_ 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)  $\frac{(14.86 + 13.7) \times (65.346 - 4.10)}{(43.888 - 32.888)} =$  \_\_\_\_\_

## Significant Figures Worksheet Key

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

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

Instructors Initials \_\_\_\_\_

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

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

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

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

Instructors Initials \_\_\_\_\_

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

a)  $23.7 \times 3.8 = \underline{90.}$       f)  $1.678 / 0.42 = \underline{4.0}$

b)  $45.76 \times 0.25 = \underline{11}$       g)  $28.367 / 3.74 = \underline{7.58}$

c)  $81.04 \text{ g} \times 0.010 = \underline{0.81}$       h)  $4278 / 1.006 = \underline{4252}$

d)  $6.47 \times 64.5 = \underline{417}$       i)  $(6.8 + 4.7) \times 17.44 = \underline{201}$

e)  $43.678 \times 64.1 = \underline{2.80 \times 10^3}$       j)  $(320. - 22.7) \times 3.8 = \underline{1.1 \times 10^3}$

k)  $\frac{(14.86 + 13.7) \times (65.346 - 4.10)}{(43.888 - 32.888)} = \underline{159}$