

KEY

Significant Figure Worksheet.

1. Indicate the number of significant figures for each of the measurements.

| | | | | | |
|-------------------------------|----------|-------------------------------|----------|---------------------|----------|
| 37.2m | <u>3</u> | 56cm | <u>2</u> | 0.0000076s | <u>2</u> |
| 0.80kg | <u>2</u> | 301.5kg | <u>4</u> | 789mm | <u>3</u> |
| 56.02m | <u>4</u> | $4.24 \times 10^3\text{m}$ | <u>3</u> | 5.00cm | <u>3</u> |
| $2.999 \times 10^6\text{m/s}$ | <u>4</u> | $9.7 \times 10^{-10}\text{m}$ | <u>2</u> | 0.00015g | <u>2</u> |
| 0.050m | <u>2</u> | 5.6×10^2 | <u>2</u> | 104.080J | <u>6</u> |

2. Calculate the answer and express to the correct number of significant figures. Use scientific notation.

$$\begin{array}{ll} 400.87 & 37.2 + 0.12 + 363.55 = 4.009 \times 10^2 \\ 3680.08 & 4005.34 - 325.2600 = 3.68008 \times 10^3 \\ 14.4 & 2.4 \times 6.0 = 1.4 \times 10^1 \\ 9682.2 & 55 \times 0.540 \times 326 = 9.7 \times 10^3 \\ 23.96166 & 750/31.3 = 2.4 \times 10^1 \end{array}$$

$$\begin{array}{ll} 362.66 - 29.2 = 3.33 \times 10^2 & 333.46 \\ 0.00076 - 0.00060000 = 1.6 \times 10^{-4} & 0.00016 \\ 0.23 \times 0.350 \times 4 = 3. \times 10^{-1} & 0.322 \\ 0.0060 \times 55.1 \times 26 = 8.6 \times 10^0 & 8.5956 \\ (0.094) \times (720) - 44 = 6.3 \times 10^1 & 63.28 \end{array}$$

3. Scientific notation is an expression of the type

$N \times 10^n$ where N is greater than 1 and less than 10 ($1 \leq N < 10$).

For example 5,190,000 is expressed as 5.19×10^6 .