ANSWER KEY Quiz

**PART 3**

6. Perform the following mathematical operations. State your answer with the correct number of **significant digits**, with correct **units**, and in **scientific notation**.

| | Question | Show the answer in scientific notation, with correct significant figures and units |
|---|---|---|
| (a) | 25.7s - 0.1578 s<br>= 25.542 = 25.5 s = | $2.55 \times 10^1$ s |
| (b) | $5.041 \times 10^{-3}$ m + $3.5 \times 10^2$ m | $3.5 \times 10^2$ m |
| (c) | 2.040 kg + 12.3 kg<br>= 14.340 = 14.3 kg = | $1.43 \times 10^1$ kg |
| (d) | 28.50m × 0.51m × 25.6m<br>= 372.096 $m^3$ = | $3.7 \times 10^2$ $m^3$ |
| (e) | $(4.50 \times 10^2$ km) ÷ $(1.555 \times 10^{-1}$ h)<br>= 2893.89 km/h = | $2.89 \times 10^3$ kg/h |
| (f) | 79.6kg/$m^3$ × 0.006 $m^3$<br>= 0.4776 kg = | $5 \times 10^{-1}$ kg |
| (g) | $\frac{(8.90 g/cm^3) \times (3.25\ cm^3)}{75\ cm^3}$ = 0.38567 g/$cm^3$ = | $3.9 \times 10^{-1}$ g/$cm^3$ |

Rounds up

$\frac{kg}{m^3} \times m^3 = kg$

$\frac{\left(\frac{g}{cm^3}\right) \times cm^3}{cm^3} = \frac{g}{cm^3}$