

## Significant Digits, Rounding Off, and Rearranging Questions

1. State the number of significant digits.

- a) 7.651 mm
- b) 20.2 m/s
- c) 50.0 cm
- d) 0.084 km

2. Round the following values to three significant digits.

- a) 32.674 km
- b) 0.003 922 g
- c) 107.51 s

3. Complete the following calculations by providing the correctly rounded answer with units.

- a)  $22.4 \text{ h} \times 0.1 \text{ mm/h}$
- b) 465 km travelled in 5.21 h
- c)  $18 \text{ cm}^3 \times 1.10 \text{ g/cm}^3$
- d)  $72.5 \text{ min} \times 1 \text{ h}/60 \text{ min}$
- e)  $17.5 \text{ mL} + 95 \text{ mL} + 8.25 \text{ mL}$
- f)  $32.1 \text{ m} + 960 \text{ m} + 20.02 \text{ m}$
- g)  $0.2 \text{ cm} + 23.91 \text{ cm} + 0.62 \text{ cm}$
- h)  $13.63 \text{ h} - 0.5 \text{ h}$
- i)  $35.1 \text{ mm} + 67.04 \text{ mm}$
- j)  $7.52 \text{ s} + 8.678 \text{ s} + 0.24 \text{ s}$

4. Determine the area of the following shapes to the correct number of significant digits.

- a) A rectangle with a base of 100.0 m and a height of 12 m
- b) A triangle with a base of 8.23 cm and a height of 0.68 cm

5. Solve for the stated variable using the given definition.

a)  $C = 2\pi r$                        $r$

b)  $D = \frac{m}{V}$                        $m; V$

c)  $y = mx + b$                        $x$

d)  $A = \frac{1}{2} bh$                        $b$

e)  $v = \frac{d}{t}$                        $d$

f)  $A = \pi r^2$                        $r$