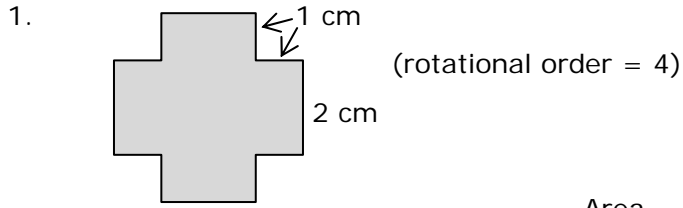
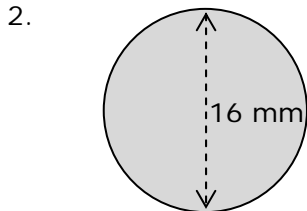


Routine Measurement Practice #2



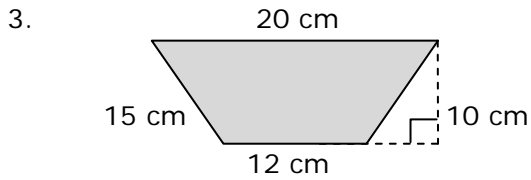
Area =

Perimeter =



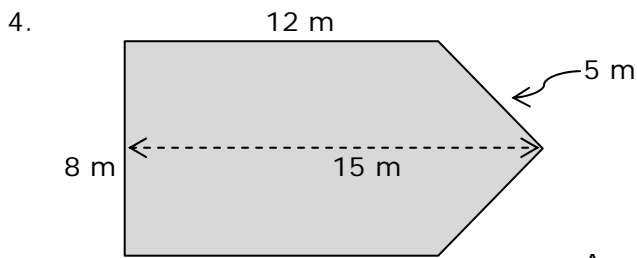
Area =

Perimeter =



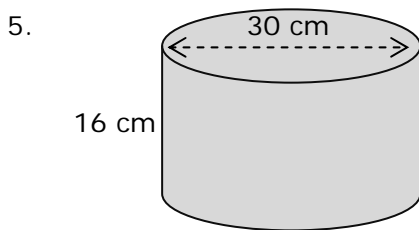
Area =

Perimeter =



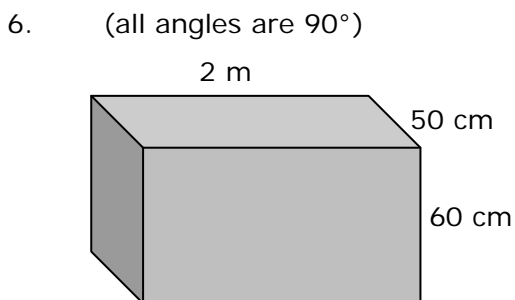
Area =

Perimeter =



Volume =

Surface Area =



Volume =

Surface Area =

Answers: Routine Measurement Practice #2

Area

Q1 outside square – 4 × inside squares

$$(4 \times 4) - 4 \times (1 \times 1) = \mathbf{12 \text{ m}^2}$$



Perimeter

all sides added together, 4 long, 8 short

$$4 \times 2 + 8 \times 1 = \mathbf{16 \text{ m}}$$

Q2 $\pi \times \text{radius}^2$ ($r = \frac{1}{2} \times 16$)

$$\pi \times 8^2 = \mathbf{201.1 \text{ mm}^2}$$

$\pi \times \text{diameter}$

$$\pi \times 16 = \mathbf{50.3 \text{ m}}$$

Q3 average base × height (at 90°)

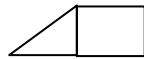
$$\frac{1}{2} \times (20 + 12) \times 10 = \mathbf{160 \text{ cm}^2}$$

all sides added together

$$20 + 12 + 15 + 15 = \mathbf{62 \text{ cm}}$$

or

rectangle + triangle



$$(12 \times 10) + (\frac{1}{2} \times 8 \times 10) = \mathbf{160 \text{ cm}^2}$$

Q4 rectangle + triangle

$$b \times h + \frac{1}{2} \times b \times h$$

$$(12 \times 8) + (\frac{1}{2} \times 8 \times 3) = \mathbf{108 \text{ m}^2}$$

all sides added together

$$8 + 12 + 12 + 5 + 5 = \mathbf{42 \text{ m}}$$

Volume

Q5 base area ($\pi \times \text{radius}^2$) × depth

$$\pi \times 15^2 \times 16 = \mathbf{11,310 \text{ cm}^3}$$

Surface Area

two bases + one side (perimeter × depth)

$$2 \times (\pi \times 15^2) + (\pi \times 30) \times 16 = \mathbf{2,922 \text{ cm}^2}$$

Q6 base × height × depth

$$2 \times 0.5 \times 0.6 = \mathbf{0.6 \text{ m}^3}$$

(Note: all in m for these calculations)

or

$$200 \times 50 \times 60 = \mathbf{600,000 \text{ cm}^3}$$

(all in cm rather than m)

6 sides, all base × height

$$(2 \times 0.5) + (2 \times 0.6) + (0.5 \times 0.6) +$$

$$(2 \times 0.5) + (2 \times 0.6) + (0.5 \times 0.6) = \mathbf{5 \text{ m}^2}$$

$$2 \times [(200 \times 50) + (200 \times 60) + (50 \times 60)]$$

$$= \mathbf{50,000 \text{ cm}^2}$$

Remember to check units as well as the number answer