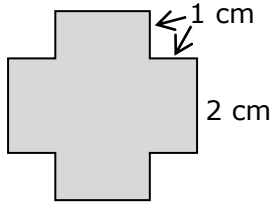


Routine Measurement Practice #2

1.

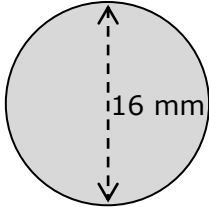


(rotational order = 4)

Area =

Perimeter =

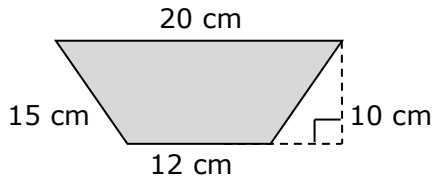
2.



Area =

Perimeter =

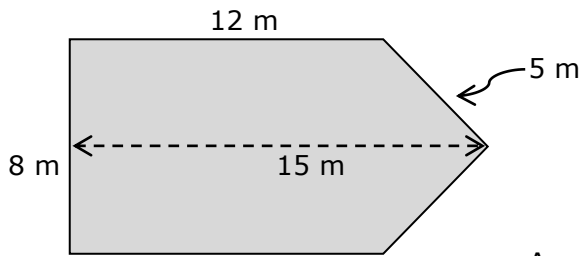
3.



Area =

Perimeter =

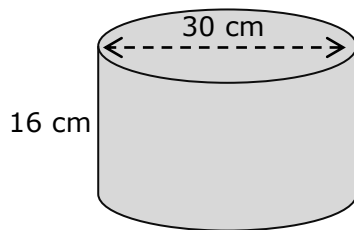
4.



Area =

Perimeter =

5.

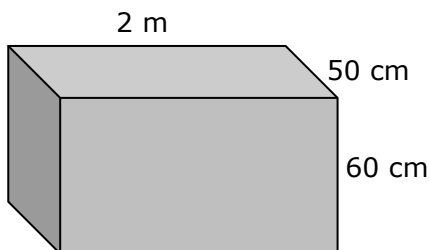


Volume =

Surface Area =

6.

(all angles are 90°)



Volume =

Surface Area =

Answers: Routine Measurement Practice #2

Area

Q1 outside square – 4 × inside squares
 $(4 \times 4) - 4 \times (1 \times 1) = \mathbf{12 \text{ cm}^2}$



Perimeter

all sides added together, 4 long, 8 short
 $4 \times 2 + 8 \times 1 = \mathbf{16 \text{ cm}}$

Q2 $\pi \times \text{radius}^2$ ($r = \frac{1}{2} \times 16$)
 $\pi \times 8^2 = \mathbf{201.1 \text{ mm}^2}$

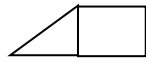
$\pi \times \text{diameter}$
 $\pi \times 16 = \mathbf{50.3 \text{ m}}$

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)

6 sides, all base × height
 $(2 \times 0.5) + (2 \times 0.6) + (0.5 \times 0.6) +$
 $(2 \times 0.5) + (2 \times 0.6) + (0.5 \times 0.6) = \mathbf{5 \text{ m}^2}$

or

$200 \times 50 \times 60 = \mathbf{600,000 \text{ cm}^3}$
 (all in cm rather than m)

$2 \times [(200 \times 50) + (200 \times 60) + (50 \times 60)]$
 $= \mathbf{50,000 \text{ cm}^2}$

Remember to check units as well as the number answer