Year 9 Circles, Area and Volume – Developing

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Year 9 · Maths · Circles, Area, Surface Area and Volume · Level 2 Developing · 10 questions

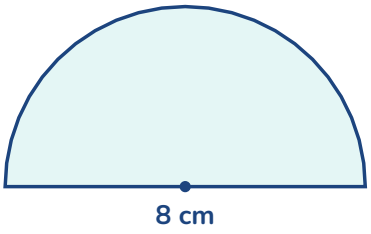
Name _____ **Date** _____

A. Use area and volume

1. A circle has an area of 25π cm^2. Find its diameter.

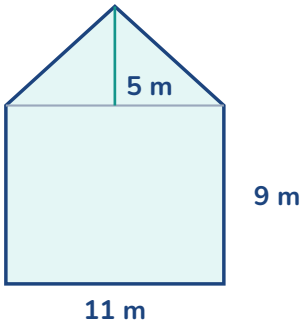
Answer _____

2. The diagram shows a semicircle with diameter 8 cm. Find its area and its perimeter. Use $\pi = 3.14$.



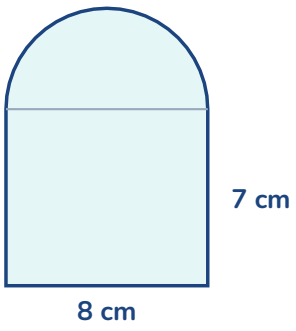
Answer _____

3. The end wall of a shed is a rectangle 11 m wide and 9 m high with a triangle of height 5 m on top. Find the area of the wall.



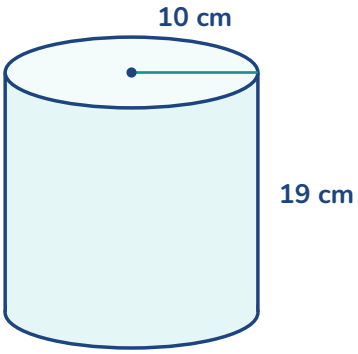
Answer _____

4. The shape is a rectangle 8 cm wide and 7 cm high with a semicircle on its top side. Find the area of the shape. Use $\pi = 3.14$.



Answer _____

5. A cylinder has radius 10 cm and height 19 cm. Find its volume. Use π = 3.14.



Answer _____

6. A square-based pyramid has a base of side 4 cm. Each triangular face has a perpendicular height of 12 cm. Find its surface area.

Answer _____

7. Green light has a wavelength of about 530 nanometres. Write this length in micrometres.

Answer _____

8. A square garden has sides of 10 m. It contains a circular pond of radius 2.6 m. Estimate the area of the garden that is not pond, using π ≈ 3 and the radius rounded to the nearest whole number. Then calculate it using π = 3.14, giving your answer to 1 decimal place.

Answer _____

9. Find the area of a circle with diameter 24 m. Use $\pi = 3.14$.

Answer _____

10. For a circle of radius 6 m, Farah works out $(3.14 \times 6)^2 = 354.9456$ m^2 for the area. Explain the mistake and find the area.

Answer _____