Year 8 Circles, Area and Volume – Developing

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Year 8 · Maths · Circles, Area and Volume · Level 2 Developing · 10 questions

Name _____ **Date** _____

A. Use area and volume

1. A triangular prism is 18 cm long. Its triangular end has a base of 3 cm and a perpendicular height of 3 cm. Find its volume.

Answer _____

2. A triangular prism is 20 cm long. Its triangular end has a base of 4 cm and a perpendicular height of 6 cm. Find its volume.

Answer _____

3. A square-based pyramid has a base of side 11 cm. Each triangular face has a perpendicular height of 6 cm. Find its total surface area.

Answer _____

4. A square-based pyramid has a base of side 9 cm. Each triangular face has a perpendicular height of 10 cm. Find its total surface area.

Answer _____

5. A shed is a cuboid 8 m long, 6 m wide and 2 m high. Draw its plan (top view) to a scale of 1 cm to 2 m. What are the measurements of your drawing?

Answer _____

6. A bicycle wheel has a diameter of 80 cm. How far, in metres, does the bicycle travel when the wheel turns 50 times? Use π = 3.14.

Answer _____

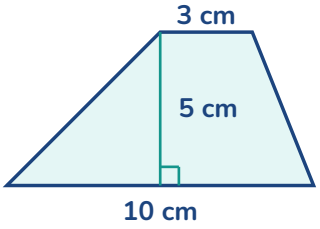
7. A road sign shows a speed limit of 70 miles per hour. Using 1 mile ≈ 1.6 km, what is this in kilometres per hour?

Answer _____

8. A circular running track has a radius of 25 m. How far does a runner go in one lap? Use π = 3.14.

Answer _____

9. A trapezium has parallel sides of 3 cm and 10 cm and a perpendicular height of 5 cm. Find its area.



Answer _____

10. Kofi finds the area of a trapezium with parallel sides 6 cm and 12 cm and height 5 cm as $(6 + 12) \times 5 = 90$ cm^2. Explain the mistake and find the area.

Answer _____