Year 8 Circles, Area and Volume – Mixed Practice

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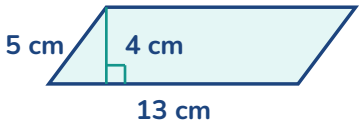
Year 8 · Maths · Circles, Area and Volume · Mixed practice · 30 questions

Name _____ **Date** _____

A. Mixed practice (mixed order)

1. A parallelogram has a base of 13 cm, a perpendicular height of 4 cm and sloping sides of 5 cm. Find its area.



Answer _____

2. A triangular prism is 15 cm long. Its triangular end has a base of 7 cm and a perpendicular height of 4 cm. Find its volume.

Answer _____

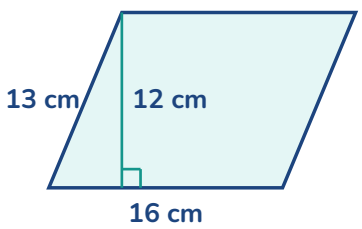
3. Find the circumference of a circle with diameter 7 cm. Use π = 3.14.

Answer _____

4. A square-based pyramid has a base of side 5 cm. Each triangular face has a perpendicular height of 7 cm. Find its total surface area.

Answer _____

5. A parallelogram has a base of 16 cm, a perpendicular height of 12 cm and sloping sides of 13 cm. Find its area.



Answer _____

6. A triangular prism is 17 cm long. Its triangular end has a base of 5 cm and a perpendicular height of 5 cm. Find its volume.

Answer _____

7. A mile is approximately 1.6 km. About how many kilometres is 32 miles?

Answer _____

8. Find the circumference of a circle with radius 5 cm. Use $\pi = 3.14$.

Answer _____

9. Farah finds the area of a trapezium with parallel sides 5 cm and 14 cm and height 5 cm as $(5 + 14) \times 5 = 95$ cm^2. Explain the mistake and find the area.

Answer _____

10. Find the circumference of a circle with radius 27 cm. Use $\pi = 3.14$.

Answer _____

11. A triangular prism is 16 cm long. Its triangular end has a base of 10 cm and a perpendicular height of 10 cm. Find its volume.

Answer _____

12. A circular plate has a diameter of 20 cm and a circumference of 62.8 cm. Work out circumference ÷ diameter. What is this number called?

Answer _____

13. A bicycle wheel has a diameter of 70 cm. How far, in metres, does the bicycle travel when the wheel turns 100 times? Use π = 3.14.

Answer _____

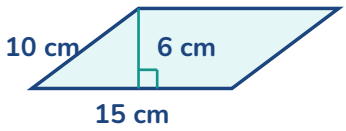
14. A shed is a cuboid 16 m long, 12 m wide and 12 m high. Draw its front view (length × height) to a scale of 1 cm to 4 m. What are the measurements of your drawing?

Answer _____

15. Hana says doubling the diameter of a circle doubles its circumference. Is Hana right? Explain.

Answer _____

16. A parallelogram has a base of 15 cm, a perpendicular height of 6 cm and sloping sides of 10 cm. Find its area.



Answer _____

17. A hexagonal pyramid has 7 vertices and 7 faces. Use Euler's formula V − E + F = 2 to find the number of edges.

Answer _____

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

Answer _____

19. A mile is approximately 1.6 km. About how many kilometres is 14 miles?

Answer _____

20. A circular running track has a radius of 20 m. How far does a runner go in one lap? Use π = 3.14.

Answer _____

21. Bella finds the area of a trapezium with parallel sides 4 cm and 10 cm and height 8 cm as $(4 + 10) \times 8 = 112$ cm^2. Explain the mistake and find the area.

Answer _____

22. A square-based pyramid has 5 vertices and 5 faces. Use Euler's formula $V - E + F = 2$ to find the number of edges.

Answer _____

23. Find the circumference of a circle with diameter 4 cm. Use $\pi = 3.14$.

Answer _____

24. A shed is a cuboid 16 m long, 8 m wide and 4 m high. Draw its plan (top view) to a scale of 1 cm to 4 m. What are the measurements of your drawing?

Answer _____

25. A circular pond has a circumference of 122.46 m. Use $\pi = 3.14$ to find its diameter.

Answer _____

26. Bella says a mile is longer than a kilometre. Is Bella right? Explain.

Answer _____

27. A square-based pyramid has a base of side 10 cm. Each triangular face has a perpendicular height of 13 cm. Find its total surface area.

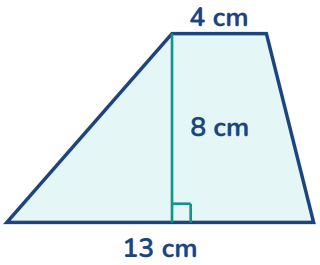
Answer _____

28. A triangular prism is 8 cm long. Its triangular end has a base of 12 cm and a perpendicular height of 3 cm. Find its volume.

Answer _____

29. A trapezium has parallel sides of 4 cm and 13 cm and a perpendicular height of 8 cm. Find its area.

Answer _____



30. A mile is approximately 1.6 km. About how many kilometres is 53 miles?

Answer _____