ALBERTA MATH 10-3 · UNIT 2 · 25 QUESTIONS

Perimeter, Area, Surface Area and Volume — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A rectangular garden is 12 m long and 7 m wide. The perimeter of the garden is**

- A 38 m
- B 19 m
- C 84 m
- D 31 m

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2 **A circular clock has a diameter of 10 cm. Using 3.14 for π, the circumference of the clock is**

- A 78.5 cm
- B 31.4 cm
- C 15.7 cm
- D 62.8 cm

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3 **Triangle ABC is shown. Side AB has length 8 cm and side AC has length 6 cm. The area of the triangle, in cm², is**

- A 48 cm²
- B 14 cm²
- C 24 cm²
- D 28 cm²

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4 **A parallelogram shaped tile has a base of 9 m and a height of 5 m. The area of the tile is**

- **A** 28 m^2
- **B** 22.5 m^2
- **C** 40 m^2
- **D** 45 m^2

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5 **A trapezoid has parallel sides of 6 cm and 10 cm, and a height of 4 cm. The area of the trapezoid is**

- **A** 32 cm^2
- **B** 64 cm^2
- **C** 40 cm^2
- **D** 24 cm^2

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6 **A circular rug has a radius of 5 cm. Using 3.14 for π, the area of the rug is**

- A 31.4 cm²
- B 78.5 cm²
- C 314.0 cm²
- D 15.7 cm²

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7 **A rectangular yard is 15 m long and 10 m wide. Fencing costs $12 per metre. The cost to fence all four sides of the yard is**

- A $300
- B $1800
- C $600
- D $900

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8 **A rectangular prism has a length of 6 cm, a width of 4 cm, and a height of 3 cm. The volume of the prism is**

- A 108 cm^3
- B 24 cm^3
- C 36 cm^3
- D 72 cm^3

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9 **A cube has an edge length of 4 cm. The surface area of the cube is**

- A 96 cm^2
- B 64 cm^2
- C 16 cm^2
- D 80 cm^2

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10 **Triangle ABC is shown. Side AB has length 14 cm and side AC has length 9 cm. The area of the triangle, in cm², is**

- A 126 cm²
- B 23 cm²
- C 63 cm²
- D 70 cm²

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11 **A rectangular room is 6 m long and 4 m wide. Flooring costs $25 per m². The cost to cover the floor is**

- A $500
- B $300
- C $600
- D $480

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12 **A cone has a radius of 6 cm and a height of 4 cm. Using 3.14 for π, the volume of the cone is**

- A 452.16 cm³
- B 75.36 cm³
- C 301.44 cm³
- D 150.72 cm³

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13 **A sphere has a radius of 5 cm. Using the π key on your calculator, the volume of the sphere, to the nearest tenth, is**

- A 523.6 cm³
- B 314.2 cm³
- C 261.8 cm³
- D 157.1 cm³

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14 **A rectangular deck is 8 ft long and 6 ft wide. The perimeter of the deck is**

- A 48 ft
- B 28 ft
- C 14 ft
- D 22 ft

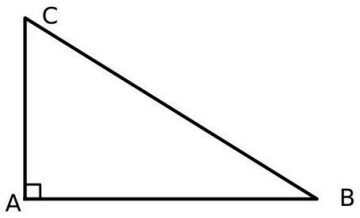
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15 **A circular pizza has a diameter of 12 cm. Using 3.14 for π, the area of the pizza is**

- A 452.16 cm²
- B 37.68 cm²
- C 113.04 cm²
- D 56.52 cm²

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16 **The diagram shows the triangular base ABC of a prism. Side AB has length 8 cm and side AC has length 5 cm. The prism is 10 cm long. The volume of the prism, in cm³, is**



A 400 cm³

B 100 cm³

C 80 cm³

D 200 cm³

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17 **A rectangular prism has a length of 5 cm, a width of 3 cm, and a height of 2 cm. The surface area of the prism is**

- A 62 cm^2
- B 30 cm^2
- C 31 cm^2
- D 46 cm^2

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18 **A concrete slab is 5 m long, 4 m wide, and 0.5 m thick. The volume of concrete in the slab is**

- A 20 m^3
- B 10 m^3
- C 14 m^3
- D 40 m^3

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19 **A square-based pyramid has a base side length of 6 cm and a height of 9 cm. The volume of the pyramid is**

- A 324 cm^3
- B 54 cm^3
- C 108 cm^3
- D 162 cm^3

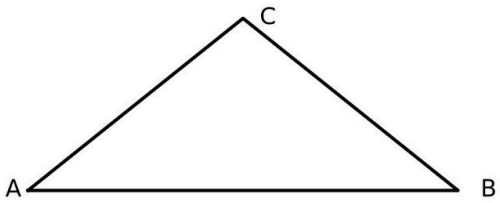
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20 **A closed cylinder has a radius of 3 cm and a height of 5 cm. Using the π key on your calculator, the surface area of the cylinder, to the nearest tenth, is**

- A 94.2 cm^2
- B 141.4 cm^2
- C 122.5 cm^2
- D 150.8 cm^2

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21 **A house wall is made of a rectangle 10 m wide and 6 m high, with a triangular roof section on top. The diagram shows the triangular roof section ABC. The base AB of the roof section is 10 m and its height is 4 m. The total area of the wall and roof section, in m², is**



- **A** 80 m²
- **B** 60 m²
- **C** 100 m²
- **D** 70 m²

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22 **A circular garden has a diameter of 14 m. Using 3.14 for π, the length of edging needed to go around the garden is**

- A 153.86 m
- B 43.96 m
- C 87.92 m
- D 21.98 m

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23 **A cylindrical water tank has a diameter of 2 ft and a height of 3 ft. Using the π key on your calculator, the volume of the tank, to the nearest tenth, is**

- A 37.7 ft^3
- B 3.1 ft^3
- C 9.4 ft^3
- D 18.8 ft^3

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24 **A sphere has a radius of 4 cm. Using the π key on your calculator, the surface area of the sphere, to the nearest tenth, is**

- **A** 268.1 cm²
- **B** 50.3 cm²
- **C** 100.5 cm²
- **D** 201.1 cm²

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25 **A square-based pyramid has a base side length of 8 cm and a slant height of 5 cm. The surface area of the pyramid is**

- **A** 80 cm²
- **B** 64 cm²
- **C** 144 cm²
- **D** 104 cm²

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ANSWER KEY

1.	A	**10.**	C	**19.**	C
2.	B	**11.**	C	**20.**	D
3.	C	**12.**	D	**21.**	A
4.	D	**13.**	A	**22.**	B
5.	A	**14.**	B	**23.**	C
6.	B	**15.**	C	**24.**	D
7.	C	**16.**	D	**25.**	C
8.	D	**17.**	A		
9.	A	**18.**	B		

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