ENGLAND GCSE MATHS AQA HIGHER · UNIT 10 · 25 QUESTIONS

Geometry, Measurement, Area, Volume and Circles — 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 roundabout has a radius of 12 m. Its area, to one decimal place, is about**

- **A** 904.8 m²
- **B** 75.4 m²
- **C** 452.4 m²
- **D** 37.7 m²

Understand It with Pulse | Flag a mistake

2 **A Ferris wheel has a diameter of 14 m. Its circumference, to one decimal place, is about**

- **A** 44 m
- **B** 22 m
- **C** 88 m
- **D** 50.3 m

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3 **A swimming pool is 20 m long, 12 m wide and 2 m deep. Its volume is**

- **A** 504 m^3
- **B** 580 m^3
- **C** 240 m^3
- **D** 480 m^3

Understand It with Pulse | Flag a mistake

4 **A cardboard box is 3 cm long, 5 cm wide and 5 cm high. Its volume is**

- A 15 cm^3
- B 75 cm^3
- C 78 cm^3
- D 20 cm^3

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5 **An ice cream cone is a cone with radius 3 cm and height 15 cm. Its volume, to one decimal place, is about**

- A 141.4 cm^3
- B 282.8 cm^3
- C 424.1 cm^3
- D 47.1 cm^3

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6 **A slice of a cheese pizza is a sector of a circle with radius 10 cm and angle 120°. Its area, to one decimal place, is about**

- A 104.7 cm²
- B 52.4 cm²
- C 314.2 cm²
- D 209.4 cm²

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7 **A sphere has radius 6 cm. Its volume, to one decimal place, is about**

- A 150.8 cm³
- B 452.4 cm³
- C 678.6 cm³
- D 904.8 cm³

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8 **A cup of coffee fills a cylindrical cup with radius 5 cm and height 10 cm. The volume of the coffee is, to one decimal place, about**

- **A** 1570.8 cm^3
- **B** 785.4 cm^3
- **C** 157.1 cm^3
- **D** 78.5 cm^3

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9 **A trapezium has parallel sides of 6 cm and 9 cm, and the distance between them is 4 cm. Its area is**

- **A** 30 cm^2
- **B** 54 cm^2
- **C** 34 cm^2
- **D** 60 cm^2

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10 **A prism has a cross-section of area 24 cm² and length 8 cm. Its volume is**

- A 216 cm³
- B 192 cm³
- C 32 cm³
- D 96 cm³

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11 **A rectangle is 14 cm long and 8 cm wide. Its perimeter is**

- A 22 cm
- B 112 cm
- C 46 cm
- D 44 cm

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12 **A chocolate cake is a cylinder with radius 8 cm and height 6 cm. Its volume, to one decimal place, is about**

- **A** 2412.7 cm^3
- **B** 1206.4 cm^3
- **C** 201.1 cm^3
- **D** 150.8 cm^3

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13 **A circle has radius 8 cm. A sector with central angle 120° has area, to one decimal place, about**

- **A** 201.1 cm^2
- **B** 67 cm^2
- **C** 16.8 cm^2
- **D** 134 cm^2

Understand It with Pulse | Flag a mistake

14 **A circle has radius 3 cm. Its area, to one decimal place, is about**

- **A** 56.5 cm²
- **B** 9.4 cm²
- **C** 18.8 cm²
- **D** 28.3 cm²

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15 **Two solids are similar. The smaller has volume 20 cm³ and the linear scale factor is 3. The volume of the larger solid is**

- **A** 540 cm³
- **B** 180 cm³
- **C** 1620 cm³
- **D** 60 cm³

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16 **A circle has radius 8 cm. An arc with central angle 120° has length, to one decimal place, about**

- A 67 cm
- B 33.6 cm
- C 50.3 cm
- D 16.8 cm

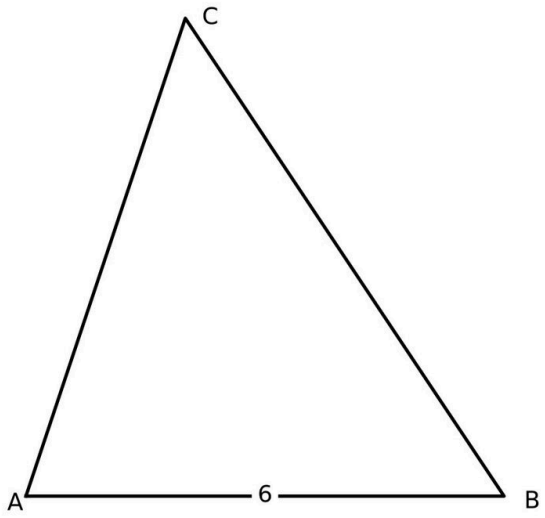
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17 **A circle has radius 10 cm. Its circumference, to one decimal place, is about**

- A 62.8 cm
- B 69.1 cm
- C 31.4 cm
- D 314.2 cm

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18 **A triangle has base 6 cm and height 6 cm. Its area is**



A 24 cm²

B 36 cm²

C 18 cm²

D 12 cm²

Understand It with Pulse | Flag a mistake

19 **A sphere has radius 4 cm. Its volume, to one decimal place, is about**

- **A** 278.1 cm³
- **B** 67 cm³
- **C** 201.1 cm³
- **D** 268.1 cm³

Understand It with Pulse | Flag a mistake

20 **A cylinder has radius 3 cm and height 10 cm. Its volume, to one decimal place, is about**

- **A** 188.5 cm³
- **B** 94.2 cm³
- **C** 282.7 cm³
- **D** 28.3 cm³

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21 **A cuboid is 3 cm by 2 cm by 2 cm. Its total surface area is**

- A 32 cm²
- B 16 cm²
- C 34 cm²
- D 12 cm²

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22 **A trapezium has parallel sides of 7 cm and 11 cm, and the distance between them is 3 cm. Its area is**

- A 27 cm²
- B 54 cm²
- C 77 cm²
- D 30 cm²

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23 **A prism has a cross-section of area 30 cm² and length 10 cm. Its volume is**

- **A** 150 cm³
- **B** 330 cm³
- **C** 40 cm³
- **D** 300 cm³

Understand It with Pulse | Flag a mistake

24 **A rectangle is 8 cm long and 7 cm wide. Its perimeter is**

- **A** 32 cm
- **B** 15 cm
- **C** 56 cm
- **D** 30 cm

Understand It with Pulse | Flag a mistake

25 **A cone has radius 5 cm and height 12 cm. Its volume, to one decimal place, is about**

A 377 cm³

B 62.8 cm³

C 942.5 cm³

D 314.2 cm³

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ANSWER KEY

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

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