Area, Perimeter & Volume: Hard Practice Paper 4

Q1. A playground is made from two rectangles joined together, one measuring 12 m by 5 m and the other 7 m by 4 m. What is the total area?

A. 28 m² B. 60 m² C. 76 m² D. 88 m² E. 96 m²

Q2. A cuboid measures 10 cm by 4 cm by 3 cm. What is its total surface area?

A. 82 cm² B. 120 cm² C. 140 cm² D. 164 cm² E. 328 cm²

Q3. A cuboid has a volume of 1,000 cm³ and a base measuring 20 cm by 10 cm. What is its height?

A. 4 cm B. 5 cm C. 6 cm D. 8 cm E. 10 cm

Q4. A rectangle has an area of 45 cm² and a perimeter of 28 cm. What is its width?

A. 3 cm B. 5 cm C. 6 cm D. 9 cm E. 15 cm

Q5. A triangle has an area of 96 cm² and a base of 24 cm. What is its height?

A. 4 cm B. 6 cm C. 8 cm D. 12 cm E. 16 cm

Q6. A cube has a total surface area of 150 cm². What is its volume?

A. 25 cm³ B. 75 cm³ C. 125 cm³ D. 150 cm³ E. 625 cm³

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Q7. Decking costs £25 per square metre. How much does it cost to lay decking on an area measuring 6 m by 3.5 m?

A. £210 B. £450 C. £475 D. £525 E. £600

Q8. A vegetable patch measures 8 m by 5 m. A path 1 m wide is laid all the way around the outside. What is the area of the path?

A. 26 m² B. 28 m² C. 30 m² D. 36 m² E. 70 m²

Q9. How many cubes of side 4 cm fit inside a box measuring 20 cm by 12 cm by 8 cm?

A. 15 B. 24 C. 30 D. 40 E. 48

Q10. A rectangle has an area of 84 cm² and a width of 6 cm. What is its perimeter?

A. 20 cm B. 28 cm C. 34 cm D. 40 cm E. 48 cm

Q11. A tank measures 60 cm by 40 cm by 25 cm. How many litres does it hold when full? (1 litre = 1,000 cm³)

A. 6 litres

B. 12.5 litres

C. 60 litres

D. 125 litres

E. 600 litres

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Q12. The length and the width of a rectangle are both doubled. What happens to its perimeter?

A. It stays the same

B. It doubles

C. It trebles

D. It becomes 4 times bigger

E. It becomes 8 times bigger

Q13. A triangle has a base of 13 cm and a height of 10 cm. What is its area?

A. 23 cm^2 B. 46 cm^2 C. 65 cm^2 D. 130 cm^2 E. 260 cm^2

Q14. A square has an area of 289 cm^2. What is its perimeter?

A. 17 cm B. 34 cm C. 51 cm D. 68 cm E. 1,156 cm

Q15. One litre is 1,000 cm^3. How many cubic centimetres are there in 2 litres?

A. 20 cm^3

B. 200 cm^3

C. 2,000 cm^3

D. 20,000 cm^3

E. 200,000 cm^3

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