Area, Perimeter & Volume: Hard Practice Paper 5

Q1. A field is a 20 m by 12 m rectangle with an 8 m by 5 m rectangle removed from one corner. What is its area?

A. 160 m² B. 185 m² C. 200 m² D. 215 m² E. 240 m²

Q2. A cuboid measures 7 cm by 6 cm by 2 cm. What is its total surface area?

A. 68 cm² B. 84 cm² C. 104 cm² D. 136 cm² E. 272 cm²

Q3. A cuboid has a volume of 720 cm³ and a base measuring 12 cm by 6 cm. What is its height?

A. 6 cm B. 8 cm C. 10 cm D. 12 cm E. 15 cm

Q4. A rectangle has an area of 108 cm² and a perimeter of 42 cm. What is its length?

A. 9 cm B. 10 cm C. 12 cm D. 14 cm E. 18 cm

Q5. A triangle has an area of 120 cm² and a height of 16 cm. What is its base?

A. 7.5 cm B. 12 cm C. 15 cm D. 20 cm E. 30 cm

Q6. A cube has a volume of 512 cm³. What is its total surface area?

A. 64 cm² B. 128 cm² C. 256 cm² D. 384 cm² E. 3,072 cm²

Q7. Floor tiles cost £22 per square metre. How much does it cost to tile a floor measuring 5 m by 2.4 m?

A. £154 B. £240 C. £264 D. £280 E. £330

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Q8. A lawn measures 10 m by 6 m. A gravel border 1.5 m wide is laid all the way around the outside. What is the area of the border?

A. 48 m² B. 51 m² C. 57 m² D. 60 m² E. 117 m²

Q9. How many cubes of side 5 cm fit inside a box measuring 25 cm by 20 cm by 10 cm?

A. 20 B. 30 C. 40 D. 50 E. 100

Q10. A rectangle has an area of 150 cm² and a length of 15 cm. What is its perimeter?

A. 25 cm B. 30 cm C. 40 cm D. 50 cm E. 60 cm

Q11. A tank measures 1.2 m by 50 cm by 40 cm. How many litres does it hold when full? (1 litre = 1,000 cm³)

A. 24 litres

B. 60 litres

C. 120 litres

D. 240 litres

E. 2,400 litres

Q12. The sides of a square are all made 3 times longer. How many times bigger is the perimeter?

A. 2 times B. 3 times C. 6 times D. 9 times E. 12 times

Q13. A triangle has a base of 40 cm and a height of 9 cm. What is its area?

A. 49 cm² B. 98 cm² C. 180 cm² D. 360 cm² E. 720 cm²

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Q14. A rectangle has a length 5 cm greater than its width, and its perimeter is 38 cm. What is its area?

A. 66 cm^2 B. 78 cm^2 C. 84 cm^2 D. 90 cm^2 E. 96 cm^2

Q15. There are 10,000 cm^2 in 1 m^2. How many square metres are there in 50,000 cm^2?

A. 0.5 m^2 B. 5 m^2 C. 50 m^2 D. 500 m^2 E. 5,000 m^2

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