Area, Perimeter & Volume: Hard Practice Paper 1

Q1. A garden is a 12 m by 8 m rectangle with a 5 m by 3 m rectangle removed from one corner. What is its area?

A. 66 m² B. 78 m² C. 81 m² D. 96 m² E. 111 m²

Q2. A cuboid measures 5 cm by 4 cm by 3 cm. What is its total surface area?

A. 47 cm² B. 60 cm² C. 94 cm² D. 120 cm² E. 188 cm²

Q3. A cuboid has a base area of 36 cm² and a height of 7 cm. What is its volume?

A. 43 cm³ B. 126 cm³ C. 180 cm³ D. 252 cm³ E. 504 cm³

Q4. A rectangle has an area of 120 cm² and a perimeter of 44 cm. What is its length?

A. 10 cm B. 11 cm C. 12 cm D. 15 cm E. 20 cm

Q5. A triangle has an area of 54 cm² and a base of 12 cm. What is its height?

A. 4.5 cm B. 6 cm C. 9 cm D. 12 cm E. 18 cm

Q6. A cube has a volume of 125 cm³. What is its total surface area?

A. 25 cm² B. 100 cm² C. 125 cm² D. 150 cm² E. 750 cm²

Q7. Painting costs £4 per square metre. How much does it cost to paint a wall measuring 6 m by 2.5 m?

A. £34 B. £50 C. £60 D. £64 E. £75

myfreeschool

Q8. A lawn measures 10 m by 6 m. A path 1 m wide is laid all the way around the outside of it. What is the area of the path?

A. 32 m² B. 36 m² C. 40 m² D. 56 m² E. 96 m²

Q9. How many cubes of side 5 cm fit inside a box measuring 30 cm by 20 cm by 15 cm?

A. 36 B. 60 C. 72 D. 90 E. 120

Q10. A rectangle measures 10 cm by 6 cm. A small square is cut from one corner, making an L-shape. What is the perimeter of the L-shape?

A. 28 cm B. 30 cm C. 32 cm D. 34 cm E. 36 cm

Q11. A tank measures 50 cm by 40 cm by 30 cm. How many litres does it hold when full? (1 litre = 1,000 cm³)

A. 6 litres

B. 12 litres

C. 60 litres

D. 120 litres

E. 600 litres

Q12. A square has sides of 6 cm. If every side is doubled in length, how many times bigger is the area?

A. 2 times B. 3 times C. 4 times D. 6 times E. 8 times

Q13. A triangle has a base of 20 cm and a height of 12 cm. What is its area?

A. 32 cm² B. 60 cm² C. 120 cm² D. 240 cm² E. 480 cm²

myfreeschool

Q14. A rectangle has a length 3 times its width and a perimeter of 48 cm. What is its area?

A. 36 cm^2 B. 72 cm^2 C. 108 cm^2 D. 144 cm^2 E. 192 cm^2

Q15. A cube has edges of 4 cm. What is its total surface area?

A. 16 cm^2 B. 48 cm^2 C. 64 cm^2 D. 96 cm^2 E. 128 cm^2

myfreeschool