Area, Perimeter & Volume: Hard Practice Paper 3

Q1. A piece of card is a 14 cm by 10 cm rectangle with a 6 cm by 5 cm rectangle cut from one corner. What is its area?

A. 100 cm² B. 104 cm² C. 110 cm² D. 125 cm² E. 140 cm²

Q2. A cuboid measures 8 cm by 3 cm by 2 cm. What is its total surface area?

A. 46 cm² B. 48 cm² C. 76 cm² D. 92 cm² E. 184 cm²

Q3. A cuboid has a volume of 480 cm³ and a height of 6 cm. What is the area of its base?

A. 40 cm² B. 60 cm² C. 80 cm² D. 96 cm² E. 2,880 cm²

Q4. A rectangle has an area of 60 cm² and a perimeter of 32 cm. What is its length?

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

Q5. A triangle has an area of 45 cm² and a base of 18 cm. What is its height?

A. 2.5 cm B. 5 cm C. 7.5 cm D. 9 cm E. 10 cm

Q6. A cube has a total surface area of 96 cm². What is its volume?

A. 16 cm³ B. 48 cm³ C. 64 cm³ D. 96 cm³ E. 512 cm³

Q7. Carpet costs £18 per square metre. How much does it cost to carpet a room measuring 4.5 m by 4 m?

A. £153 B. £288 C. £306 D. £324 E. £360

myfreeschool

Q8. A rectangular pond measures 5 m by 3 m. A border 0.5 m wide is laid all the way around the outside. What is the area of the border?

A. 8 m² B. 9 m² C. 10 m² D. 12 m² E. 24 m²

Q9. How many cubes of side 2 cm fit inside a box measuring 10 cm by 8 cm by 6 cm?

A. 24 B. 30 C. 48 D. 60 E. 80

Q10. A square has an area of 169 cm². What is its perimeter?

A. 13 cm B. 26 cm C. 39 cm D. 52 cm E. 676 cm

Q11. A tank measures 80 cm by 50 cm by 25 cm. How many litres does it hold when full? (1 litre = 1,000 cm³)

A. 10 litres

B. 50 litres

C. 100 litres

D. 155 litres

E. 1,000 litres

Q12. The edges of a cube are all doubled in length. How many times bigger is its volume?

A. 2 times B. 4 times C. 6 times D. 8 times E. 16 times

Q13. A triangle has a base of 30 cm and a height of 14 cm. What is its area?

A. 44 cm² B. 105 cm² C. 210 cm² D. 420 cm² E. 840 cm²

myfreeschool

Q14. A rectangle has a perimeter of 60 cm and a length 4 times its width. What is its area?

A. 96 cm^2 B. 108 cm^2 C. 144 cm^2 D. 180 cm^2 E. 225 cm^2

Q15. There are 10,000 cm^2 in 1 m^2. How many square centimetres are there in 3 m^2?

A. 300 cm^2

B. 3,000 cm^2

C. 30,000 cm^2

D. 300,000 cm^2

E. 3,000,000 cm^2

myfreeschool