Q1. The area of the parallelogram whose length is 30 cm, width is 20 cm and one diagonal is 40 cm is

(a) 200√15 cm^2

(b) 300√15 cm^2

- (c) 100√15 cm^2
- (d) 150√15 cm^2

Q2. The perimeter of a rhombus is 60 cm and one of its diagonal is 24 cm. The area of the rhombus is

- (a) 432 sq. cm
- (b) 216 sq. cm
- (c) 108 sq. cm

(d) 206 sq. cm

Q3. The area of an isosceles trapezium is 176 cm<sup>2</sup> and the height is 2/11th of the sum of its parallel sides. If the ratio of the length of the parallel sides is 4 : 7, then the length of a diagonal (in cm) is

- (a) 2√137
- (b) 24
- (c) √137
- (d) 28

Q4. The lengths of two parallel sides of a trapezium are 6 cm and 8 cm. If the height of the trapezium be 4 cm, then its area is

(a) 28 cm<sup>2</sup>

(b) 56 cm^2

(c) 30 cm^2

(d) 36 cm^2

Q6. The outer circumference of circular race-track is 528 metre. The track is everywhere 14 metre wide. Cost of leveling the track at the rate of Rs. 10 per sq. metre is:

(a) Rs. 77660

- (b) Rs. 67760
- (c) Rs. 66760
- (d) Rs. 76760

Q7. If the diagonals of two squares are in the ratio of 2 : 5. Their area will be in the ratio of

- (a) √2 : √5
- (b) 2 : 5
- (c) 4 : 25
- (d) 4 : 5

Q8. The area of a field in the shape of a trapezium measure 1440 m<sup>2</sup>. The perpendicular distance between its parallel sides is 24 m. If the ratio of the parallel sides is 5 : 3, the length of the longer parallel side is:

- (a) 75 m
- (b) 45 m
- (c) 120 m
- (d) 60 m

Q9. If the area of a triangle is 1176 cm<sup>2</sup> and the ratio of base and corresponding altitude is 3 : 4, then the altitude of the triangle is:

- (a) 42 cm
- (b) 52 cm
- (c) 54 cm

(d) 56 cm

Q10. The sides of a triangle are in the ratio 1/2 : 1/3 : 1/4. If the perimeter of the triangle is 52 cm, the length of the smallest side is:

(a) 24 cm

- (b) 10 cm
- (c) 12 cm
- (d) 9 cm

Q12. An equilateral triangle is drawn on the diagonal of a square. The ratio of the area of the triangle to that of the square is

- (a) √3 ∶2
- (b) 1∶ √3
- (c) 2∶ √3
- (d) 4∶√3

Q13. If the radius of a circle is increased by 50%. Its area is increased by:

- (a) 125%
- (b) 100%
- (c) 75%
- (d) 50%

Q14. If the circumference and area of a circle are numerically equal, then the diameter is equal to:

(a) area of the circle

(b) π/2

(c) 2π

(d) 4

Q15. If the arcs of unit length in two circles subtend angles of  $60^{\circ}$  and  $75^{\circ}$  at their centres, the ratio of their radii is

- (a) 3 : 4
- (b) 4 : 5
- (c) 5 : 4
- (d) 3 : 5