1. If the length and diagonal of a rectangle are 35 m and 37 m, then its area is

   a. 444 m^2 b. 420 m^2 c. 240 m^2 d. 400 m^2

2. If the area of a square is 16200 m^2, then the length of its diagonal is

   a. 180 m b. 81 m c. 162 m d. 126 m

3. How many metres of carpet 1 m wide will be required to cover the floor of a room 10 m by 6 m?

   a. 120 m b. 60 m c. 50 m d. 30 m

4. On doubling the length of a square, its area will become

   a. two times b. three times c. four times d. eight times

5. If two sides of an isosceles right triangle are 1 m 60 cm each, then the area of the triangle is

   a. 0.64 m^2 b. 1.28 m^2 c. 2.56 m^2 d. 3.84 m^2

6. A parallelogram with a base 16.5 cm has an area 231 cm^2. The altitude corresponding to the base is

   a. 14.5 cm b. 14 cm c. 12 cm d. 12.5 cm

7. If the ratio of areas of two triangles is 4:3 and that of their heights is 3:4, then the ratio of their bases is

   a. 16:9 b. 9:16 c. 4:3 d. 3:4

8. If the perimeter of a semicircle is 36 cm, then its diameter is

   a. 35 cm b. 21 cm c. 14 cm d. 28 cm

9. If the radius of a circle is 3.5 cm, then the perimeter of the semicircle is

   a. 16 cm b. 21 cm c. 18 cm d. 20 cm

10. If the circumference of a circle is 16π cm, then its area is

    a. 80π cm^2 b. 64π cm^2 c. 48π cm^2 d. 32π cm^2

CHAPTER 9

A. Manjeet is carving various geometrical shapes to be pasted on the walls of a kindergarten class. He wants to decorate all the shapes and he needs to find the perimeter and area of these shapes to decide how much decoration material and paint he needs to purchase.

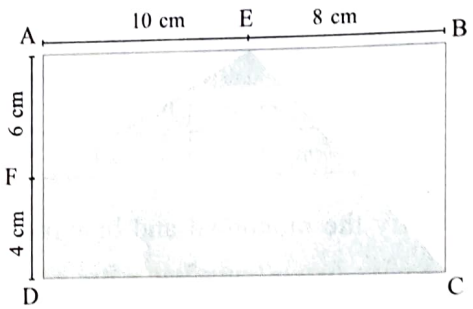
1. What is the perimeter and area of a rectangular cardboard of length 6 cm and breadth 3.5 cm?
   a. 19 cm and 6 cm^2
   b. 21 cm and 9 cm^2
   c. 24 cm and 16 cm^2
   d. 19 cm and 21 cm^2

2. What is the area of a square piece whose diagonal is 8 cm?
   a. 64 cm^2
   b. 32 cm^2
   c. 64 m^2
   d. 32 m^2

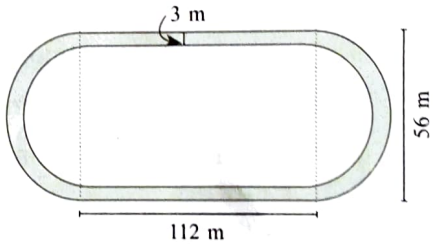
3. Manjeet is thinking of putting decorations along the diagonals of one of the walls of dimensions 4 m by 3 m. What is the length of the decoration material needed?
   a. 25 m
   b. 10 m
   c. 5 m
   d. 15 m

4. What is the cost of painting a parallelogram of base 9 cm and corresponding height 5.5 cm @ ₹5 per sq. cm?
   a. ₹247.50
   b. ₹49.50
   c. ₹123.75
   d. ₹165

5. What is the area of the shaded region?
   a. 180 sq. cm
   b. 30 sq. cm
   c. 110 sq. cm
   d. 40 sq. cm



B. A racetrack is in the form of a rectangle with outer dimensions being 112 m by 56 m with semicircles on the shorter sides. The track is 3 m wide. The inner rectangle is designed to be a ground which can be used for playing football or similar activities.



1. What is the length of the outer track to be fenced?
   a. 576 m
   b. 336 m
   c. 352 m
   d. 400 m

2. What is the cost of fencing @₹6 per m if fencing is to be done on both the outer and inner side of the track?
   a. ₹4781.14
   b. ₹5381.40
   c. ₹4686.86
   d. ₹2400

3. The track needs to be painted. What is the area of the track?
   a. 672 sq. m
   b. 1171.7 sq. m
   c. 499.7 sq. m
   d. 1000 sq. m

4. The rectangular field needs to be mowed properly for a football match. What is the cost of mowing the field at ₹8 per sq.m?
   a. ₹94976
   b. ₹50176
   c. ₹44800
   d. ₹42400

17. **Assertion (A):** Area of a triangle with base 5 cm and height 8 cm is 20 sq. cm.
Reason (R): Area of a parallelogram equals the product of the base and the corresponding height.

18. **Assertion (A):** The circumference of a circle of radius 7 cm is 44 cm.
Reason (R): The circumference of a circle is $2\pi r$.