Quadrilateral

1. A person has purchased two adjacent plots, one is in rectangular shape and other is in square shape and combined them to make a single new plot. The breadth of the rectangular plot is equal to the side of the square plot and the cost of fencing the new plot is Rs. 390 (Rs. 5/m). Find the side of square if the length of the rectangular plot is 15 m.
(A) 10 m   **(B)** 8 m
(C) 12 m   **(D)** 9 m
(E) 6 m

2. Perimeter of a rectangle is equal to the perimeter of a square whose area is 324 cm². Find the area of rectangle if length of rectangle is 6 cm more than the side of square?
(A) 144 cm^2 **(B)** 256 cm^2
(C) 324 cm^2 **(D)** 288 cm^2
(E) 196 cm^2

3. The perimeter of a rectangle is 160 m and the difference of two adjacent sides is 48 m. Find the side of a square whose area is equal to the area of the rectangle.
(A) 32 m   **(B)** 8 m
(C) 4 m   **(D)** 16 m
(E) None of these

4. The area of the rectangle is four times of the area of the square. If the length of the rectangle is 60 cm and breadth of the rectangle is equal to the side of the square, then find the side of the square.
(A) 20 cm   **(B)** 25 cm
(C) 18 cm   **(D)** 15 cm
(E) 22 cm

5. Area of rectangle is 96 square metres. When the length of the same rectangle is increased by 6 metres and the breadth is decreased by 3 metres, then the area of rectangle decreases by 30 square metres. What is the perimeter of a square whose sides are equal to the length of the rectantgle?
(A) 48 m   **(B)** 60 m
(C) 80 m   **(D)** 64 m
(E) 52 m

6. The sides of a rectangular field are in the ratio 3 : 4 with its area as 7500 sq. m. The cost of fencing the field at rate of 25 – paise per meter is:
(A) Rs. 87.50   **(B)** Rs. 86.50
(C) Rs. 67.50   **(D)** Rs. 55.50
(E) Rs. 77.50

7. The perimeter of a square is 128 metre. The area of a rectangle is 52 sq. metre less than that of the square. If the breadth of rectangle be 27 metre, find out the perimeter of rectangle.
(A) 125 metre   **(B)** 140 metre
(C) 126 metre   **(D)** 130 metre
(E) None of these

8. The length & breadth of a rectangle is in ratio 4 : 7. If perimeter is 88 cm. find area of rectangle.
(A) 414 cm^2 **(B)** 336 cm^2
(C) 448 cm^2 **(D)** 524 cm^2
(E) 396 cm^2

9. A rectangular field was fenced at 4 Rs./meter and ratio of breadth to length of field is 9 : 4. If total cost of fencing was Rs. 208, then find area of the rectangular field?
(A) 144m²   **(B)** 72m²
(C) 180m²   **(D)** 108m²
(E) 36m²

10. Length and breadth of a rectangular field is 130 m and 90 m, respectively. Inside it, a road of uniform width 15 m is left on all the sides.

In the remaining part, a park is made. What is the area of the road?
(A) 5500 m^2 **(B)** 5800 m^2
(C) 5600 m^2 **(D)** 5700 m^2
(E) None of these

11. The breath and length of rectangle is in the ratio 4:7. If perimeter is 88 cm then find the area of rectangle.
(A) 448 cm^2 **(B)** 396 cm^2
(C) 414 cm^2 **(D)** 554 cm^2
(E) 534 cm^2

12. If the breadth of a rectangle is 2/3rd of its length and the area of another rectangle which is thrice the area of the first rectangle is 7200 cm^2 then find the perimeter of the first rectangle.
(A) 200 cm   **(B)** 300 cm
(C) 400 cm   **(D)** 100 cm
(E) 500 cm

Direction (13 – 15): Given below in each question there are two statements (I) and (II). You have to determine, which statement is sufficient to give the answer of question. Also there are five alternatives given, you have choose one alternative as your answer of the questions:

13. What will perimeter of smaller rectangle?
I. Ratio between length of smaller and larger rectangle is 4 : 5 and breadth of both rectangle is equal. Difference between perimeter of both rectangle is 8 cm.
II. Breadth of both rectangle is equal to side of square, whose area is 196 cm^2 .
(A) Only statement I is sufficient
(B) Only statement II is sufficient
(C) Statement I and II both together sufficient
(D) Either statement I or Statement II alone sufficient
(E) Neither statement I or statement II sufficient

14. The perimeter of a triangle is equal to perimeter of a rectangle. Length of rectangle is 75% of side of a square and ratio of length to breadth of rectangle is 3 : 2. If difference between perimeter of square and that of rectangle is 36 cm, then find perimeter of triangle?
(A) 60 cm   **(B)** 48 cm
(C) 72 cm   **(D)** 80 cm
(E) 96 cm

15. The perimeter of a rectangle is 420 m. The length of the rectangle is 30 m more than its breadth. Find the time taken to cross it diagonally if the rate of speed is 10m/s.
(A) 15 seconds   **(B)** 18 seconds
(C) 17 seconds   **(D)** 12 seconds
(E) 10 seconds

Direction (16): Given below in each question there are two statements (I) and (II). You have to determine, which statement is sufficient to give the answer of question. Also there are five alternatives given, you have choose one alternative as your answer of the questions:

16. What is the cost of painting the two adjacent walls of a rectangular hall which has no windows or doors?
I. The area of the base of hall is 24 square metres.
II. The breadth, length and the height of the hall are in the ratio of 4 : 6 : 5.
III. Area of one wall is 30 square metres.
(A) Only I   **(B)** Only II
(C) Only III   **(D)** Either I or III
(E) Data inadequate

17. Difference of length & breadth of a rectangle is equal to 24 cm and ratio of area of rectangle to area of square is 5 : 9. If the perimeter of rectangle is 72 cm. find the volume of cone given that height of cone is equal to breadth of rectangle and radius is equal to side of

square? (Length of rectangle is greater than its breadth)

(A) 624 π cm³   **(B)** 726 π cm³
(C) 824 π cm³   **(D)** 648 π cm³
(E) None of these

18. There is a rectangular path just inside a rectangular park. Width of the path is 2 cm. If length of park is decreased by 4 cm then, it becomes a square. Area of the rectangle is $1\frac{1}{3}$ times the area of the path.

From the above given information which of the following can be found out.

(i) Area of path

(ii) Length of the park

(iii) Sum of perimeter of the rectangular park and perimeter of the path (both external and internal perimeter)

(A) only (ii)
(B) only (ii) and (iii)
(C) only (i) and (iii)
(D) all of the above
(E) only (iii)