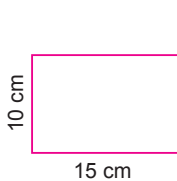


CHAPTER 14

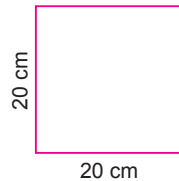
PERIMETER AND AREA OF 2-D SHAPES

More Questions for Practice

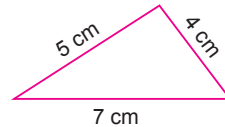
1. How much distance would you cover if you move around each of the following figures just once? The measurements of the segments are shown for each rectilinear figure:



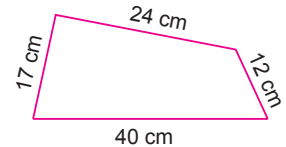
(a)



(b)



(c)



(d)

2. Find the perimeter of a square with one side:
- (a) 15 mm (b) 24 m (c) 37 m (d) 25 m.
3. Find the perimeter of the rectangles whose dimensions are given below:
- (a) length 40 m; breadth 12 m (b) length 400 m; breadth 80 m.
4. Determine the perimeter of a triangle whose sides are
- (a) 15 m, 25 m and 20 m. (b) 14 cm, 20 cm and 25 cm.
5. The rectangular frame for a picture is 24.5 cm wide and 33.6 cm high. Its border is 4.4 cm wide. Calculate the perimeter of the picture.
6. Two boxers have to fight in a square arena of side 35 m. Four poles are fixed on the ground at the four corners of the arena. A rope fence is to be put up around the poles to keep away the spectators. What length of rope will be required if 5 m of rope is required for tying the knots?
7. Amrita runs around a square field of side 80 m. Babita runs around a rectangular field with length 90 m and breadth 55 m. Who covers the larger distance and by how much?
8. Lily runs around a square field of side 145 m. Lucy runs around a rectangular field whose length is 160 m and breadth is 120 m. Who covers the smaller distance?
9. A carpet 6 m 20 cm long and 3 m 40 cm broad is bound by tape around the edges. How much tape is needed? If the cost of the tape is ₹ 4 per metre, find the cost of the required tape.
10. How many rectangles can be drawn with 36 cm as the perimeter, given that the sides are positive integers in cm?
[Hint: Every square is also a rectangle.]
11. Find the area of a rectangular field whose
length = 50 m, breadth = 30 m.
12. Find the area of a rectangle whose
length = 7.2 cm, breadth = 4 cm.

13. The area of a rectangle is 150 sq cm. If one of its sides is 10 cm long, how long is its other side? Also, find the perimeter of the rectangle.
14. What will be the area of a square field whose side measures 85 m 7 dm? By how many square metres does it fall short of a hectare?
15. A rectangular field is 45 metres long. Its breadth is 15 metres less than its length. Find the cost of (a) levelling it at the rate of ₹ 2.00 per square metre, and (b) fencing it at the rate of ₹ 3.75 per metre.
16. A rectangular room is 10 m long and 7 m wide. Find the cost of covering the floor with carpet 2 m wide at ₹ 35 per metre.
17. A rectangle is 16 m by 9 m. Find the side of the square whose area equals the area of the rectangle. By how much does the perimeter of the rectangle exceed the perimeter of the square?
18. A rectangular field measures 290 m by 210 m. How long will it take for a girl to go two times around the field if she walks at the rate of 2 m per second?
19. Find the perimeter of a rectangular field whose length is four times its breadth and which has an area equal to 30,976 sq cm.
[Hint: Let b be the breadth. Then length = $4b$.
 $\therefore 4b \times b = 30976 \Rightarrow b^2 = 7744 \Rightarrow b = 88$ cm.]
20. The sides of a triangular park are 310 m, 270 m and 230 m respectively. A boy is walking around the park. If he covers a distance of 90 cm in one step, how many steps will he have to take to cover the complete round of the park?
21. Find the area of a square whose side is 36 m long. If the side of the square is doubled, how many times will the area increase?
22. Which of the two, a rectangle of length 15 cm and breadth 12 cm or a square of side 14 cm has more area and by how much?
23. A rectangle and a square have the same perimeter of 100 m. Find the side of the square. If the rectangle has a breadth 2 m less than that of the square, find the breadth, length and area of the rectangle.
24. Fencing the compound of a house costs ₹ 5,452. If the rate is ₹ 94 per metre, find the perimeter of the compound. If the breadth is 10 m, find its length.
25. How many cards can be made from a paper measuring 256 cm by 1.40 m if the dimensions of each card is 16 cm \times 10 cm?

ANSWERS

1. (a) 50 cm (b) 80 cm (c) 16 cm (d) 93 cm
 2. (a) 60 mm (b) 96 m (c) 148 m (d) 100 m
 3. (a) 104 m (b) 960 m 4. (a) 60 m (b) 59 cm 5. 81 cm 6. 145 m
 7. Amrita; 30 m 8. Lucy 9. 19.2 m; ₹ 76.80 10. Nine.
 11. 1,500 sq m 12. 28.8 sq cm 13. 15 cm; 50 cm 14. 7,344.49 sq m; 2,655.51 sq m
 15. (a) ₹ 2,700 (b) ₹ 5,62.50 16. ₹ 1,225 17. 12 m; 2 m 18. 16 min 40 sec
 19. 880 cm. 20. 900 steps 21. 1296 sq m, 4 times
 22. A square of side 14 cm; 16 sq cm
 23. 25 cm; breadth = 23 cm, length = 27 cm, area = 621 sq cm 24. 58 m, 19 m. 25. 224 cards