MATHS

BOOKS - PSEB

perimeter and Area

Exercise

1. A door-frame of dimensions $3m \times 2$ m is fixed on the wall of dimension $10m \times 10$ m. Find the total labour charges for painting the

wall if the labour charges for painting $1m^2$ of the wall is Rs. 2.50.

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2. The area of a rectangular sheet is 500 cm^2. If the length of the sheet is 25 cm, what is its width? Also find the perimeter of the rectangular sheet

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3. Anu wants to fence the garden in front of her house, on three sides with lengths 20 m, 12 m and 12 m. Find the cost of fencing at the rate of Rs. 150 per metre.

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4. A wire is in the shape of a square of side 10 cm. If the wire is rebent into a rectangle of length 12 cm, find its breadth. Which encloses more area, the square or the rectangle?

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5. The area of a square and a rectangle are equal. If the side of the square is 40 cm and the breadth of the rectangle is 25 cm, find the length of the rectangle. Also, find the perimeter of the rectangle.

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6. The length and the breadth of a rectangular piece of land are 500 m and 300 m

respectively. Find (i) its area (ii) the cost of the land, if 1 m^2 of the land costs Rs.10,000

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7. Find the area of a square park whose perimeter is 320 m.

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8. Find the breadth of a rectangular plot of land, if its area is $440m^2$ and the length is 22

m. Also find its perimeter.

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9. The perimeter of a rectangular sheet is 100 cm. If the length is 35 cm, find its breadth. Also find the area

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10. The area of a square park is the same as of a rectangular park. If the side of the square

park is 60 m and the length of the rectangular park is 90 m, find the breadth of the rectangular park.

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11. A wire is in the shape of a rectangle. Its length is 40 cm and breadth is 22 cm. If the same wire is rebent in the shape of a square, what will be the measure of each side. Also find which shape encloses more area?

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12. The perimeter of a rectangle is 130 cm. If the breadth of the rectangle is 30 cm, find its length. Also find the area of the rectangle

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13. A door of length 2 m and breadth 1m is fitted in a wall. The length of the wall is 4.5 m and the breadth is 3.6 m . Find the cost of white washing the wall, if the rate of white washing the wall is $Rs.\ 20$per m^2.

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14. One of the sides and the corresponding height of a parallelogram are 4 cm and 3 cm respectively. Find the area of the parallelogram

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15. Find the height 'x' if the area of the parallelogram is $24cm^2$ and the base is 4 cm

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16. The two sides of the parallelogram ABCD are 6 cm and 4 cm. The height corresponding to the base CD is 3 cm . Find the(i) area of the parallelogram. (ii) the height corresponding to the base AD

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17. Find the area of the following triangles

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18. Find BC, if the area of the triangle ABC is 36 cm^2 and the height AD is 3 cm

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19. In $\triangle$ PQR, PR = 8 cm, QR = 4 cm and PL = 5 cm . Find: the area of the PQR

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20. Find the area of each of the following parallelograms:

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22. Find the area of each of the following parallelograms:

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23. Find the area of each of the following parallelograms:

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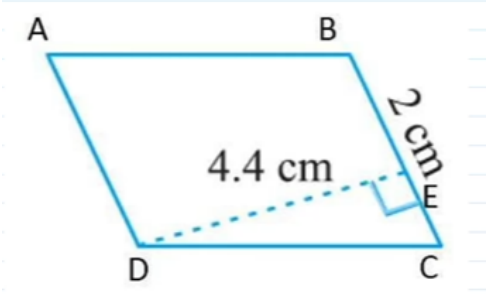
24. Find the area of each of the following parallelograms:



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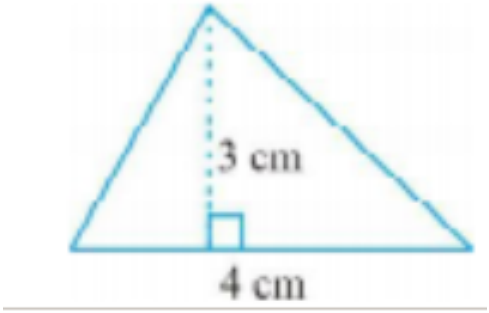
25. Find the area of each of the following triangles:



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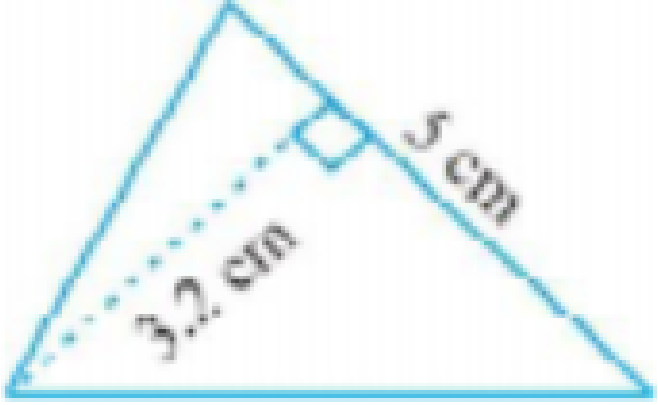
26. Find the area of each of the following triangles:



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27. Find the area of each of the following triangles

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28. Find the area of each of the following triangles:

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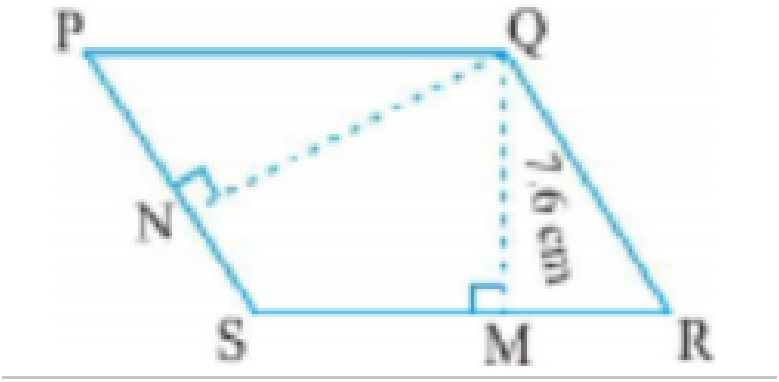
29. PQRS is a parallelogram. QM is the height from Q to SR and QN is the height from Q to PS. If SR = 12 cm and QM = 7.6 cm. Find the

area:



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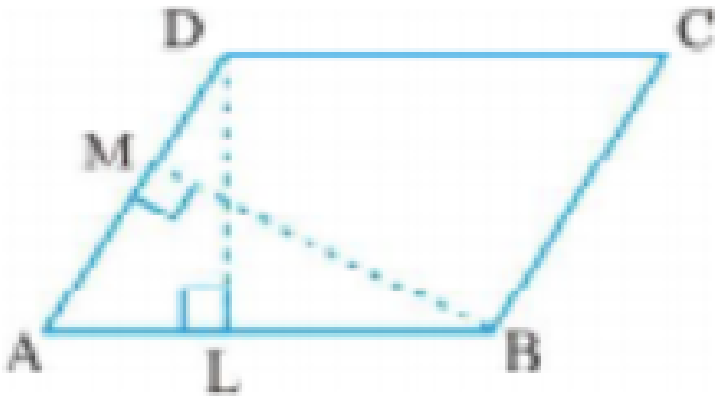
30. DL and BM are the heights on sides AB and AD respectively of parallelogram ABCD . If the area of the parallelogram is 1470 cm2, AB = 35 cm and AD = 49 cm, find the length of BM and

DL



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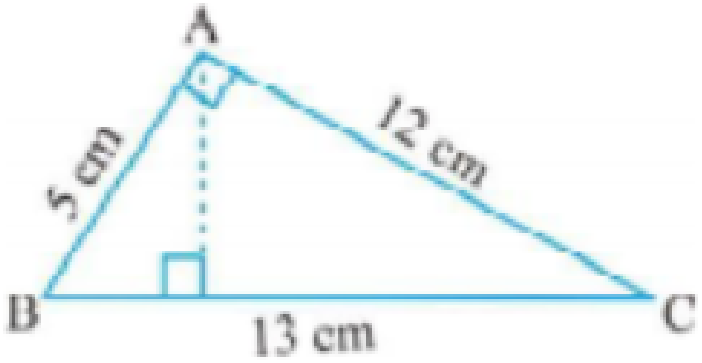
31. $\triangle$ ABC is right angled at A . AD is perpendicular to BC. If AB = 5 cm, BC = 13 cm and AC = 12 cm, Find the area of ABC. Also find

the length of AD.



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32. $\triangle$ ABC is isosceles with AB = AC = 7.5 cm and BC = 9 cm . The height AD from A to BC is 6 cm find the area of $\triangle$ ABC What will be the height from C to AB.i.e, CE?

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33. What is the circumference of a circle of diameter 10 cm (Take π = 3.14)?

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34. What is the circumference of a circular disc of radius 14 cm? (use π=22/7)

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35. The radius of a circular pipe is 10 cm. What length of a tape is required to wrap once around the pipe$(\pi = 3.14)$?

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36. Sudhanshu divides a circular disc of radius 7 cm in two equal parts. What is the perimeter of each semicircular shape disc? $\left(Use\pi = \frac{22}{7}\right)$

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37. Find the area of a circle of radius 30 cm $(use \pi = 3.14)$

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38. Diameter of a circular garden is 9.8 m. Find its area.

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39. The adjoining figure shows two circles with the same centre. The radius of the larger circle is 10 cm and the radius of the smaller circle is 4 cm(a) the area of the larger circle (b) the area of the smaller circle (c) the shaded area between the two circles. $(\pi = 3.14)$

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40. Find the circumference of the circles with the following radius: $\left(Take\pi = \frac{22}{7}\right)$: Radius

= 14 cm

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41. Find the area of the following circles, given that: radius = 14 mm $\left(Take \pi = \frac{22}{7}\right)$

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42. If the circumference of a circular sheet is 154 m, find its radius. Also find the area of the sheet. $\left(Take \pi = \frac{22}{7}\right)$

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43. A gardener wants to fence a circular garden of diameter 21m. Find the length of the rope he needs to purchase, if he makes 2 rounds of fence. Also find the cost of therope, if it costs Rs. 4 per meter. $\left(Take\pi = \frac{22}{7}\right)$

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44. From a circular sheet of radius 4 cm, a circle of radius 3 cm is removed. Find the area of the remaining sheet. $(Take \pi = 3.14)$

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45. Saima wants to put a lace on the edge of a circular table cover of diameter 1.5 m. Find the length of the lace required and also find its cost if one meter of the lace costs Rs. 15. $(Take \pi = 3.14)$

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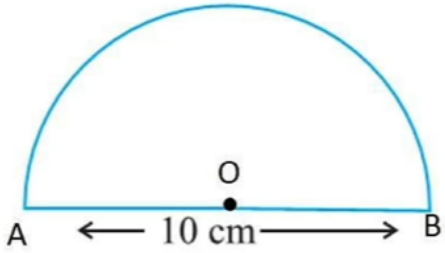
46. Find the perimeter of the adjoining figure, which is a semicircle including its diameter



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47. Find the cost of polishing a circular table-top of diameter 1.6 m, if the rate of polishing is

Rs. $15/m^2$. $(Take \pi = 3.14)$

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48. Shazli took a wire of length 44 cm and bent it into the shape of a circle. Find the radius of that circle. Also find its area. If the same wire is bent into the shape of a square, what will be the length of each of its sides? Which figure encloses morearea, the circle or the square? $\left(Take \pi = \frac{22}{7}\right)$

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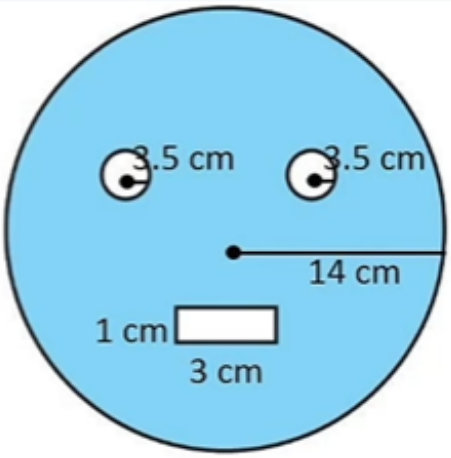
49. From a circular card sheet of radius 14 cm, two circles of radius 3.5 cm and a rectangle of length 3 cm and breadth 1cm are removed. (as shown in the adjoining figure). Find the area of the remaining sheet.

(Take $\pi = \frac{22}{7}$)



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50. A circle of radius 2 cm is cut out from a square piece of an aluminium sheet of side 6 cm. What is the area of the left over aluminium sheet? $(Take \pi = 3.14)$

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51. The circumference of a circle is 31.4 cm. Find the radius and the area of the circle? $(Take \pi = 3.14)$

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52. A circular flower bed is surrounded by a path 4 m wide. The diameter of the flower bed is 66 m. What is the area of this path? $(\pi = 3.14)$

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53. A circular flower garden has an area of $314m^2$. A sprinkler at the centre of the garden

can cover an area that has a radius of 12 m. Will the sprinkler water the entire garden? $(Take \pi = 3.14)$

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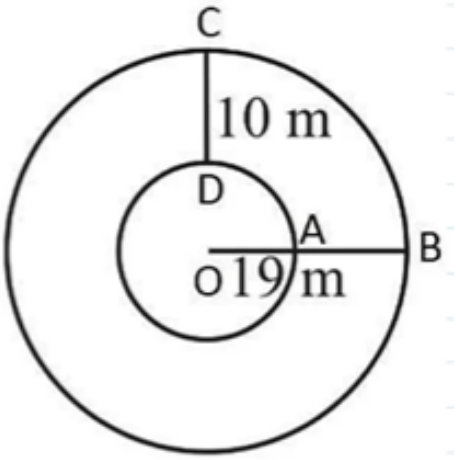
54. Find the circumference of the inner and the outer circles, shown in the adjoining

figure? $(Take \pi = 3.14)$



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55. How many times a wheel of radius 28 cm must rotate to go 352 m? $\left(Take \pi = \frac{22}{7}\right)$

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56. The minute hand of a circular clock is 15 cm long. How far does the tip of the minute hand move in 1 hour. $(Take\pi = 3.14)$

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57. A rectangular park is 45 m long and 30 m wide. A path 2.5 m wide is constructed outside the park. Find the area of the path.

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58. A path 5 m wide runs along inside a square park of side 100 m. Find the area of the path. Also find the cost of cementing it at the rate of Rs.$250 per 10 m^2$

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59. Two cross roads, each of width 5 m, run at right angles through the centre of a rectangular park of length 70 m and breadth 45 m and parallel to its sides. Find the area of

the roads. Also find the cost of constructing the roads at the rate of Rs.105 per m^2.

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60. A garden is 90 m long and 75 m broad. A path 5 m wide is to be built outside and around it. Find the area of the path. Also find the area of the garden in hectare

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61. A 3 m wide path runs outside and around a rectangular park of length 125 m and breadth 65 m. Find the area of the path

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62. A picture is painted on a cardboard 8 cm long and 5 cm wide such that there is a margin of 1.5 cm along each of its sides. Find the total area of the margin

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63. A verandah of width 2.25 m is constructed all along outside a room which is 5.5 m long and 4 m wide. Find: (i) the area of the verandah. (ii) the cost of cementing the floor of the verandah at the rate of Rs. 200 per m^2

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64. A path 1 m wide is built along the border and inside a square garden of side 30 m. Find: (i) the area of the path (ii) the cost of planting

grass in the remaining portion of the garden at the rate of Rs. 40 per m^2.

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65. Two cross roads, each of width 10 m, cut at right angles through the centre of a rectangular park of length 700 m and breadth 300 m and parallel to its sides. Find the area of the roads. Also find the area of the park excluding cross roads. Give the answer in hectares

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66. Pragya wrapped a cord around a circular pipe of radius 4 cm (adjoining figure) and cut of the length required of the cord . Then she wrapped it around squre box of side 4 cm (also shown). Did she have any cord left? $(\pi = 3.14)$

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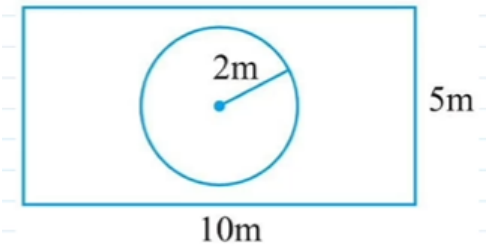
67. The adjoining figure represents a rectangular lawn with a circular flower bed in the middle. Find: (i) the area of the whole land (ii) the area of the flower bed (iii) the area of the lawn excluding the area of the flower bed



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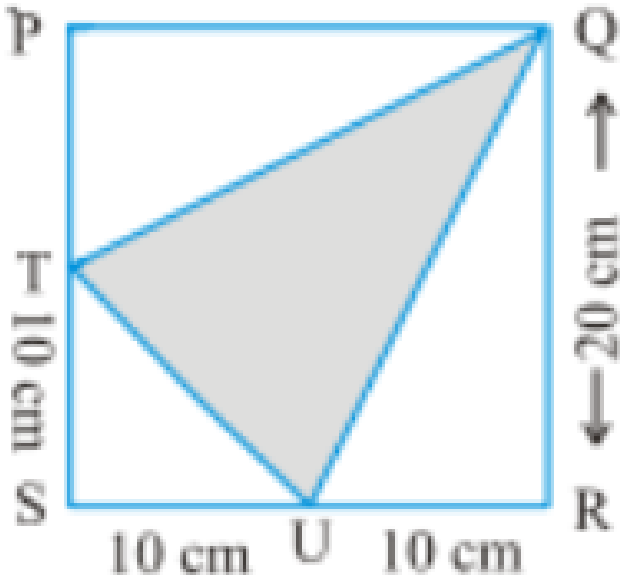
68. In the following figures, find the area of the shaded portion



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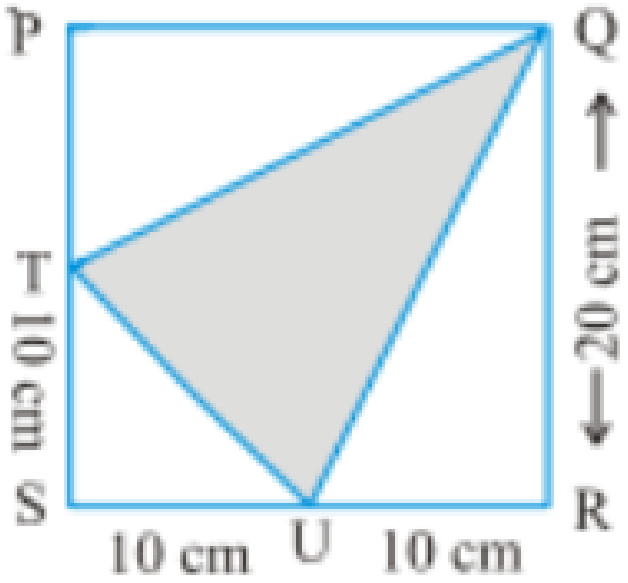
69. In the following figures, find the area of the shaded portion



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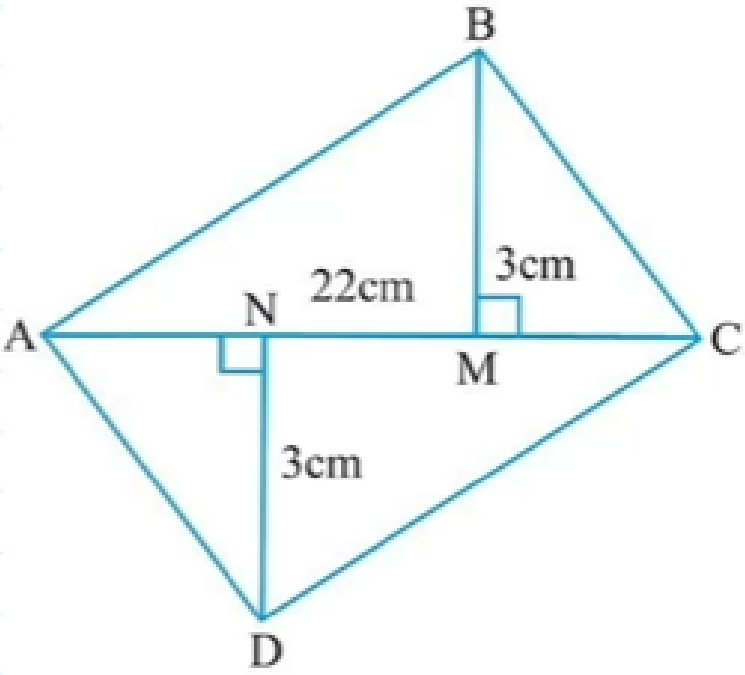
70. Find the area of the quadrilateral $ABCD$

Here, $AC = 22cm, BM = 3cm, DN = 3cm,$

and $BM \perp AC, DN \perp AC$



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71. Find the circumference of the circles with the following radius: $\left(Take\pi = \frac{22}{7}\right)$: Radius = 28 mm

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72. Find the circumference of the circles with the following radius: $\left(Take\pi = \frac{22}{7}\right)$: Radius = 28 cm

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73. Find the area of the following circles, given that: Diameter = 49m

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74. Find the area of the following circles, given that: Radius = 5cm

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