EduSahara™ Learning Center Assignment

Grade : Class X, CBSE
Chapter : Area Related to Circles
Name : Areas of Combinations of Plane Figures

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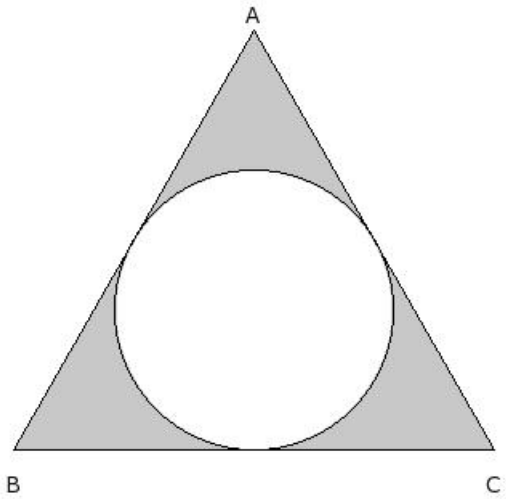
1. In the given figure, a circle is inscribed touching the sides of an equilateral triangle of side 30 cm. Find the area of the shaded region



(i) 162.00 sq.cm (ii) 152.00 sq.cm (iii) 181.00 sq.cm

(iv) 154.00 sq.cm (v) 128.00 sq.cm

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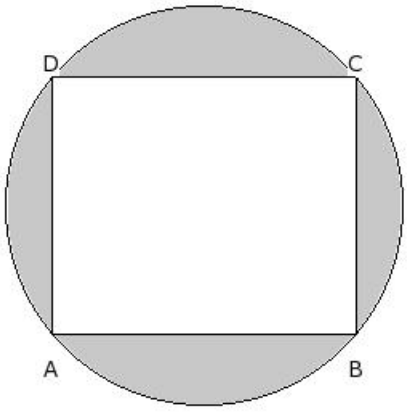
2. In the given figure, the circle circumscribes a rectangle with sides 19.00 cm and 16.00 cm. Find the area of the remaining portion other than the rectangle



(i) 174.79 sq.cm (ii) 180.79 sq.cm (iii) 198.79 sq.cm

(iv) 187.79 sq.cm (v) 152.79 sq.cm

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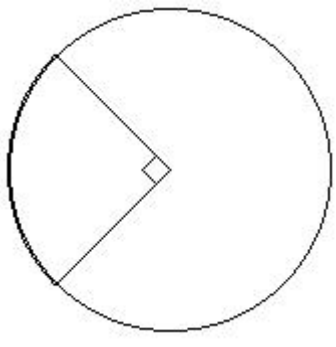
3. In the given figure, the radius of the circle is 8 cm. Find the area of the minor sector



(i) 53.28 sq.cm (ii) 50.28 sq.cm (iii) 45.28 sq.cm

(iv) 55.28 sq.cm (v) 47.28 sq.cm

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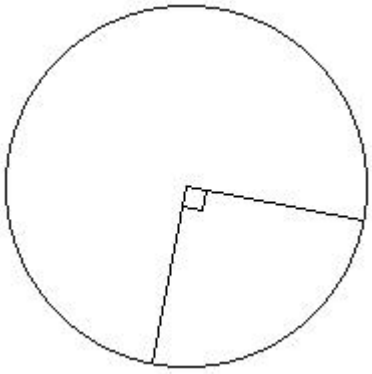
4. In the given figure, the radius of the circle is 9 cm. Find the area of the major sector



(i) 202.93 sq.cm (ii) 186.93 sq.cm (iii) 196.93 sq.cm

(iv) 167.93 sq.cm (v) 190.93 sq.cm

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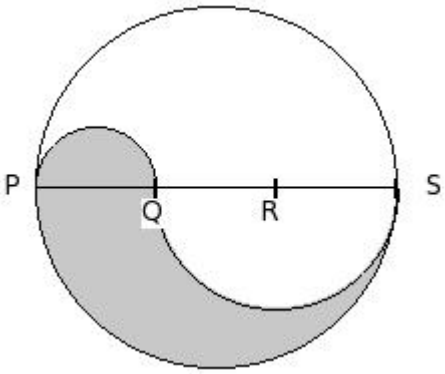
5. In the given figure ,PQRS is the diameter of the circle of radius 13.50 cm and PQ = QR = RS. Find the area of the shaded region



(i) 165.93 sq.cm (ii) 194.93 sq.cm (iii) 218.93 sq.cm

(iv) 190.93 sq.cm (v) 187.93 sq.cm

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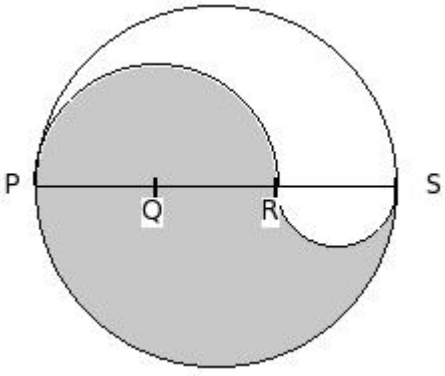
6. In the given figure ,PQRS is the diameter of the circle of radius 10.50 cm and PQ = QR = RS. Find the perimeter of the shaded region



(i) 66.00 cm (ii) 69.00 cm (iii) 71.00 cm

(iv) 63.00 cm (v) 61.00 cm

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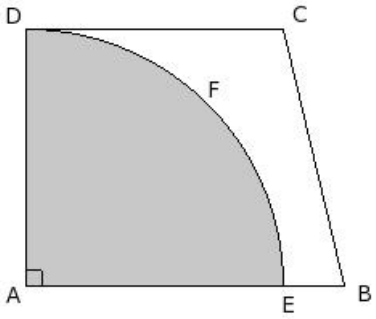
7. In the given figure , ABCD is a trapezium. A quarter circle AEFD is removed from the trapezium. If AD = CD = 16 and EB = 3.8 , find the area of the remaining portion



(i) 88.26 sq.cm (ii) 90.26 sq.cm (iii) 85.26 sq.cm

(iv) 82.26 sq.cm (v) 80.26 sq.cm

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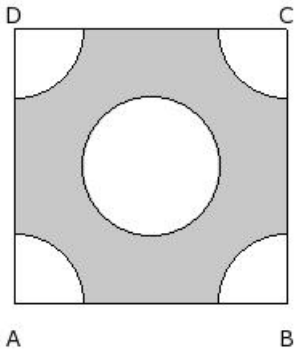
8. In the given figure, ABCD is a square of side 17.00 cm . At the centre there is a circle with radius 4.25 cm and the same circle quadrants are at the four corners. Find the area of the shaded region.



(i) 150.46 sq.cm (ii) 175.46 sq.cm (iii) 163.46 sq.cm

(iv) 193.46 sq.cm (v) 188.46 sq.cm

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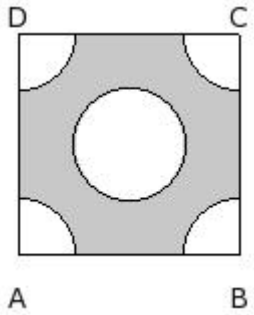
9. In the given figure, ABCD is a square of side 11.00 cm . At the centre there is a circle with radius 2.75 cm and the same circle quadrants are at the four corners. Find the perimeter of the shaded region.



(i) 61.57 cm (ii) 59.57 cm (iii) 51.57 cm

(iv) 53.57 cm (v) 56.57 cm

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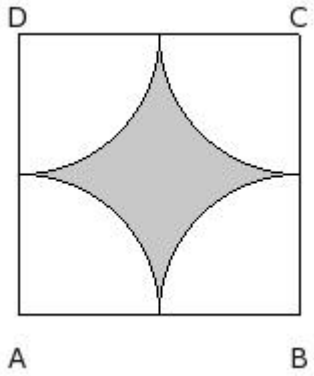
10. In the given figure, ABCD is a square of side 14.00 cm and A, B, C, D are the centres of circular arcs, each of radius 7.00 cm. Find the area of the shaded region



(i) 37.00 sq.cm (ii) 45.00 sq.cm (iii) 47.00 sq.cm

(iv) 42.00 sq.cm (v) 39.00 sq.cm

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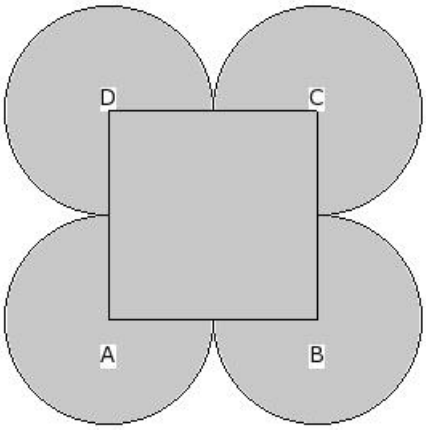
11. In the given figure, ABCD is a square of side 13.00 cm and A, B, C, D are centres of circles which touch externally in pairs. Find the area of the shaded region



(i) 567.36 sq.cm (ii) 539.36 sq.cm (iii) 594.36 sq.cm

(iv) 572.36 sq.cm (v) 561.36 sq.cm

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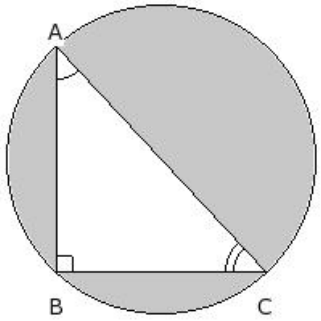
12. In the given figure, BC = 13 cm and AB = 14 cm. Find the area of the shaded region



(i) 202.79 sq.cm (ii) 217.79 sq.cm (iii) 182.79 sq.cm

(iv) 195.79 sq.cm (v) 191.79 sq.cm

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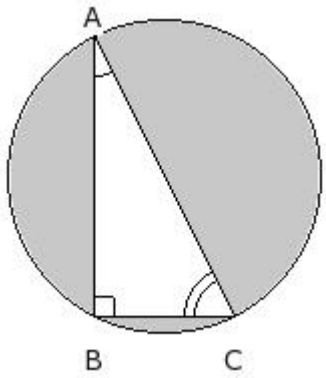
13. In the given figure, BC = 7 cm and AB = 14 cm. Find the perimeter of the shaded region



(i) 88.85 cm (ii) 82.85 cm (iii) 80.85 cm

(iv) 90.85 cm (v) 85.85 cm

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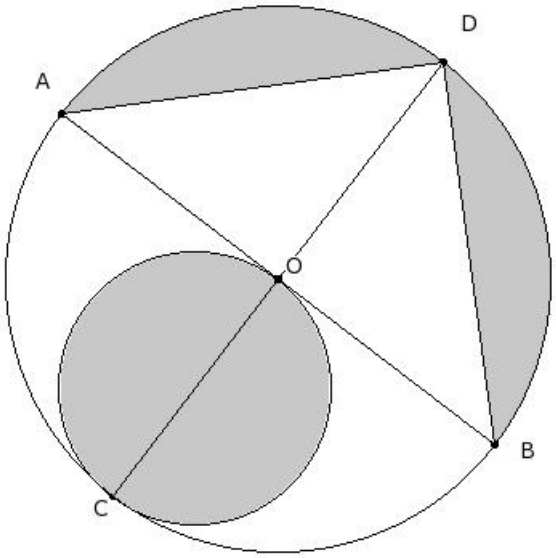
14. In the below figure, AB is the diameter of a circle with center O and OA = 17.00 cm . Find the area of the shaded region



(i) 376.21 sq.cm (ii) 368.21 sq.cm (iii) 417.21 sq.cm

(iv) 400.21 sq.cm (v) 392.21 sq.cm

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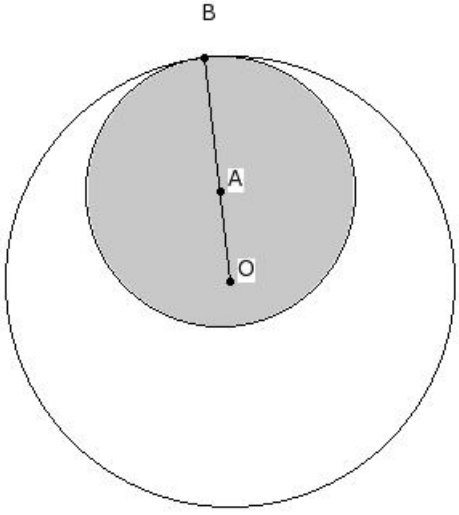
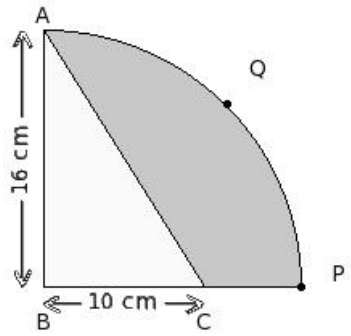
15. In the below figure, two circles with centers O and A touch internally at B. If OB = 14.00 cm and OA = 5.6 cm, find the area of the unshaded region



(i) 372.24 sq.cm (ii) 377.24 sq.cm (iii) 394.24 sq.cm

(iv) 408.24 sq.cm (v) 396.24 sq.cm

16. In the below figure, BPQA is a quadrant of a circle. AB = 16.00 cm and BC = 10 cm . Find the area of the shaded region



(i) 121.14 sq.cm (ii) 99.14 sq.cm (iii) 144.14 sq.cm

(iv) 124.14 sq.cm (v) 117.14 sq.cm

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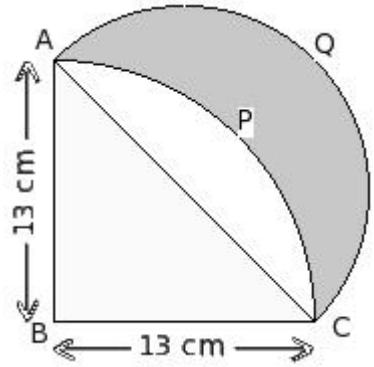
17. In the below figure, BCPA is a quadrant of a circle. BC = 13.00 cm and CQA is a semicircle with CA as the diameter. Find the area of the shaded region



(i) 89.50 sq.cm (ii) 81.50 sq.cm (iii) 79.50 sq.cm

(iv) 84.50 sq.cm (v) 87.50 sq.cm

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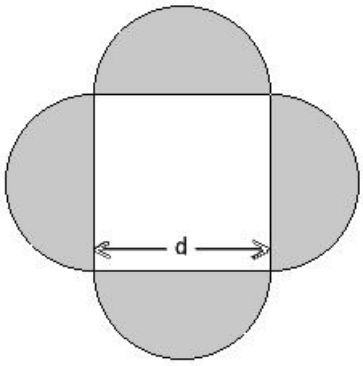
18. In the given figure, d = 11.00 cm is the diameter of the semi-circles. Find the area of the shaded region



(i) 198.14 sq.cm (ii) 177.14 sq.cm (iii) 185.14 sq.cm

(iv) 206.14 sq.cm (v) 190.14 sq.cm

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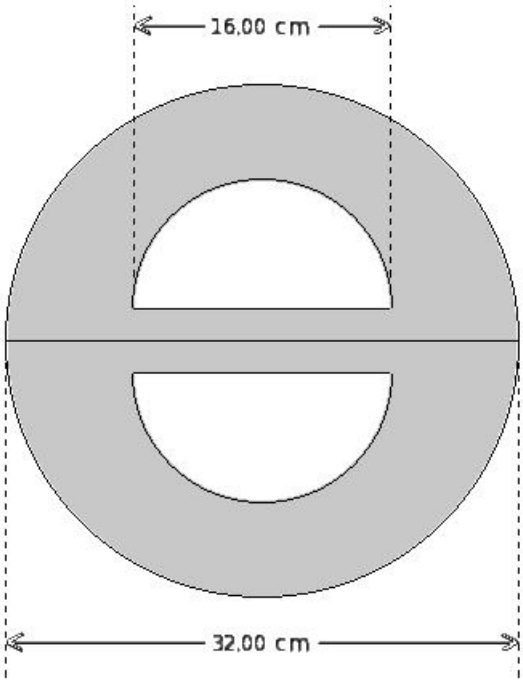
19. In the given figure, find the area of the shaded region



(i) 603.43 sq.cm (ii) 627.43 sq.cm (iii) 591.43 sq.cm

(iv) 599.43 sq.cm (v) 620.43 sq.cm

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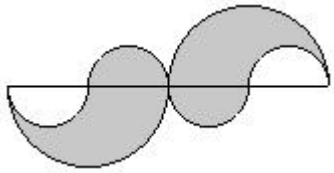
20. The given figure consists of four small semi-circles of equal radii and two big semi-circles of equal radii. The radius of each big semi-circle is 4.00 cm which is the same as the diameter of the small semi-circle. Find the area of the shaded region



(i) 47.29 sq.cm (ii) 55.29 sq.cm (iii) 53.29 sq.cm

(iv) 45.29 sq.cm (v) 50.29 sq.cm

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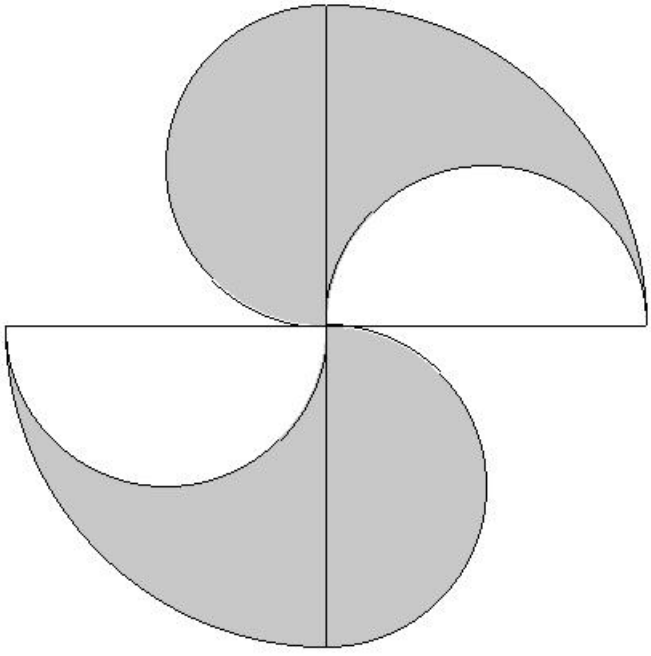
21. The given figure consists of two quarter circles each of radius 20.00 cm and four semi-circles each of radius 10.00 cm. Find the area of the shaded region



(i) 632.57 sq.cm (ii) 611.57 sq.cm (iii) 643.57 sq.cm

(iv) 628.57 sq.cm (v) 606.57 sq.cm

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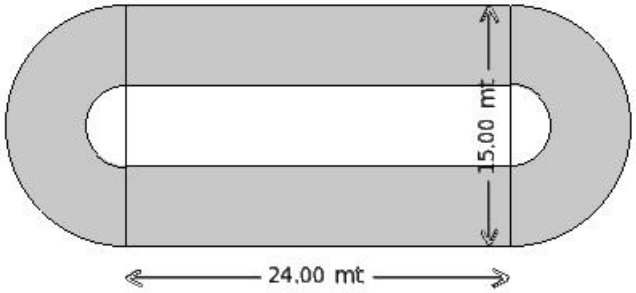
22. In the given figure, the width of the circular path is 5.00 mt. Find the area of the shaded region



(i) 420.14 sq.mts (ii) 395.14 sq.mts (iii) 397.14 sq.mts

(iv) 370.14 sq.mts (v) 411.14 sq.mts

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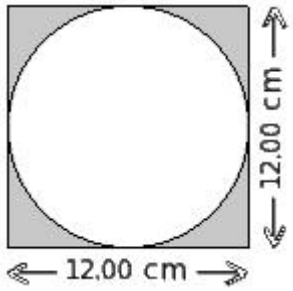
23. Find the area of the shaded region



(i) 30.86 sq.cm (ii) 35.86 sq.cm (iii) 33.86 sq.cm

(iv) 25.86 sq.cm (v) 27.86 sq.cm

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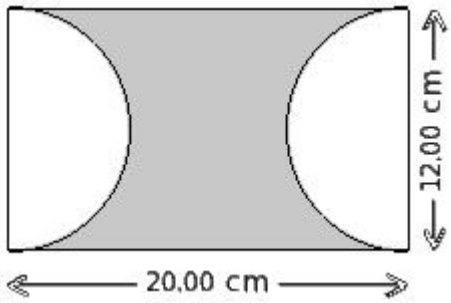
24. Find the area of the shaded region



(i) 126.86 sq.cm (ii) 100.86 sq.cm (iii) 121.86 sq.cm

(iv) 149.86 sq.cm (v) 144.86 sq.cm

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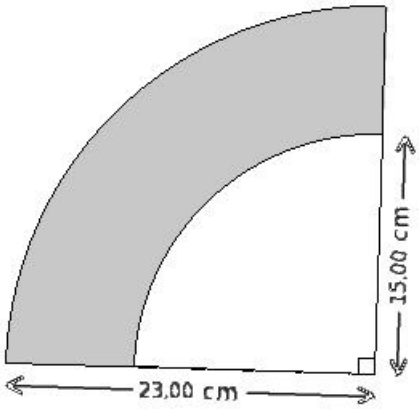
25. Find the area of the shaded region



(i) 222.86 sq.cm (ii) 255.86 sq.cm (iii) 238.86 sq.cm

(iv) 211.86 sq.cm (v) 250.86 sq.cm

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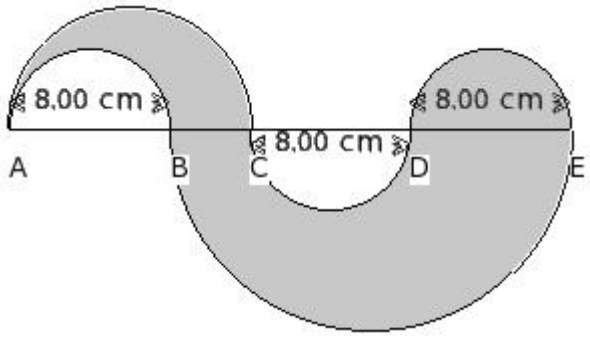
26. In the given figure, BC = 4.00 cm. Find the area of the shaded region



(i) 188.57 sq.cm (ii) 213.57 sq.cm (iii) 165.57 sq.cm

(iv) 174.57 sq.cm (v) 200.57 sq.cm

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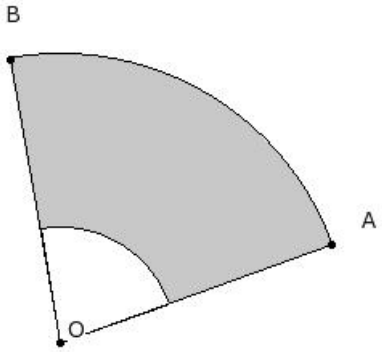
27. In the given figure, arcs of two concentric circles of radii 18.00 cm and 7.20 cm are drawn with center O. If ∠AOB = 80°, find the area of the shaded region



(i) 214.08 sq.cm (ii) 173.08 sq.cm (iii) 194.08 sq.cm

(iv) 172.08 sq.cm (v) 190.08 sq.cm

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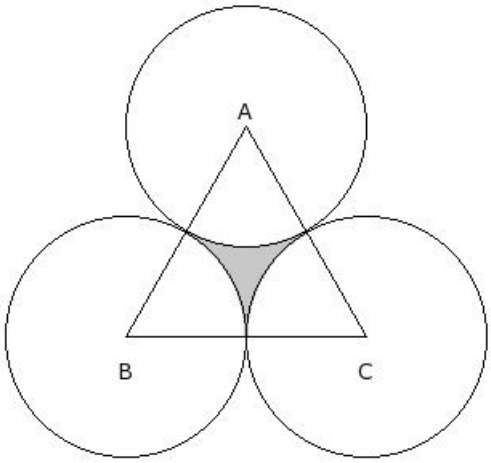
28. In the given figure △ABC is an equilateral triangle whose area is 97.43 sq.cm. With each vertex of the triangle as center, a circle is drawn with radius equal to half the length of the side of the triangle . Find the area of the shaded region



(i) 11.04 sq.cm (ii) 9.04 sq.cm (iii) 10.04 sq.cm

(iv) 7.04 sq.cm (v) 8.04 sq.cm

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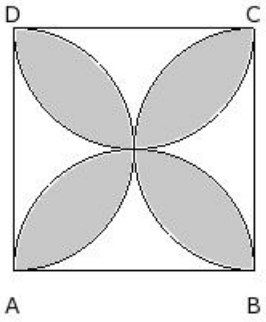
29. In the given figure, ABCD is a square with side 15.00 cm. Find the area of the shaded region



(i) 130.57 sq.cm (ii) 145.57 sq.cm (iii) 128.57 sq.cm

(iv) 114.57 sq.cm (v) 101.57 sq.cm

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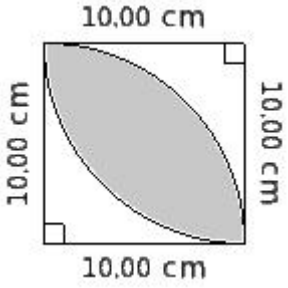
30. Find the area of the shaded region in the given figure common between the two quadrants of circles of radius 10.00 cm each



(i) 62.14 sq.cm (ii) 60.14 sq.cm (iii) 54.14 sq.cm

(iv) 57.14 sq.cm (v) 52.14 sq.cm

Assignment Key

1) (iv)
2) (ii)
3) (ii)
4) (v)
5) (iv)
6) (i)
7) (iii)
8) (ii)
9) (v)
10) (iv)
11) (i)
12) (iv)
13) (v)
14) (v)
15) (iii)
16) (i)
17) (iv)
18) (v)
19) (i)
20) (v)
21) (iv)
22) (iii)
23) (i)
24) (i)
25) (iii)
26) (i)
27) (v)
28) (ii)
29) (iii)
30) (iv)