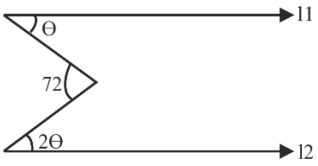
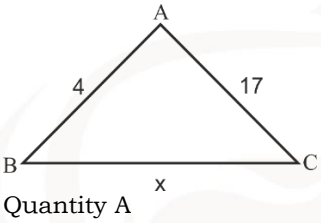
Lines and Triangle

1. Find **θ if lines l1 and l2 are parallel?**



2. A Regular Polygon has 8 sides then find the measurement of each internal angle and each external angle of a polygon?

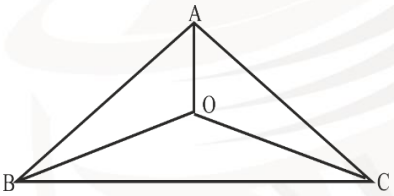
3.



Quantity A	Quantity B
No. of values that x can take	20

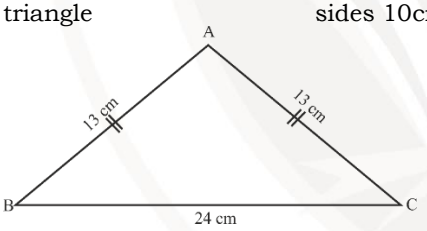
4. If 2 sides of a triangle are 10cm and 26cm then find the range of the perimeter of the triangle?

5. In ΔABC AO = BO = CO = 5 If ΔABC is equilateral then find the Area of ΔABC .



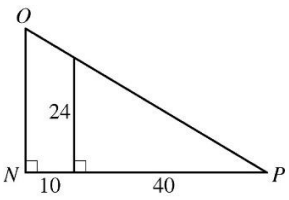
6.

Quantity A	Quantity B
Area of the given triangle	Area of triangle with 2 sides 10cm &15cm



7. In a ΔABC , AD is angle bisector of $\angle$BAC and AB =12cm ,AC=20cm then find BC if BD is 6cm?

8.

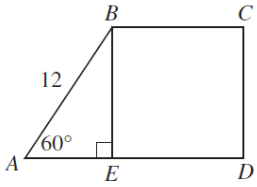


Find ON?

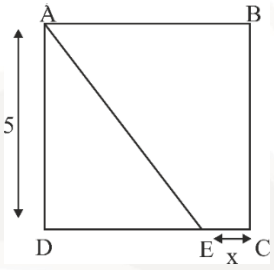
9. In ΔABC, find median BD if AB = 3.6cm, BC = 4.8cm and ∠B = 90°?

10. In a ΔABC, DE||BC and AD:DB = 2:5.Find the ratio of area of ΔADE to area of ΔABC?

11. In the figure below, BCDE is a square and AB = 12. What is the area of square BCDE?



12. Find the ratio of area of ΔADE to area of square ABCD?

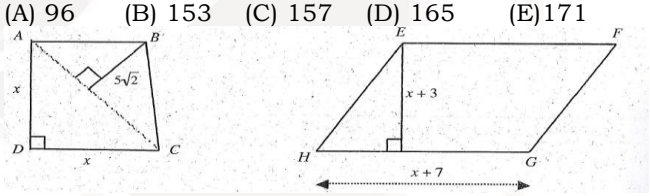


Quadrilateral & Mensuration

13. Find the area of cyclic quadrilateral with sides 12cm, 20cm,18cm and 10cm?

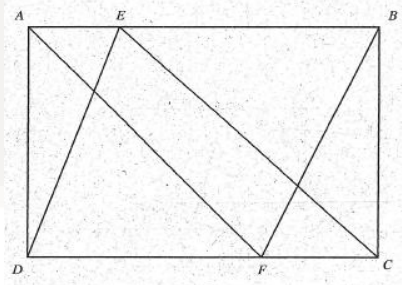
14. In the figure, the area of quadrilateral *ABCD is* 75. What is the area of parallelogram EFGH?

(A) 96 (B) 153 (C) 157 (D) 165 (E)171



15. In the figure the areas of parallelograms EBFD and AECF are 3 and 2 respectively. What is the area of rectangle ABCD?

(A) 3 (B) 4 (C) 5 (D) 4√3 (E) 7



16. Area of an isosceles trapezium is 176 cm^2 and its parallel sides are 26cm and 18cm. Find the oblique side of the trapezium?

17. 3 Cubes each of side 5cm are joined together to form a L shape. Find its surface area?

ss

18. The volume of a wall, 5 times as high as it is broad and 8 times as long as it is high, is 12.8 cu. meters. Find the breadth of the wall.

(A) 0.04m (B) 4m (C) 400 cm (D) 40 cm

19. From a Solid Right Circular Cylinder of Height 2.4 Cm and Radius 0.7 Cm, a Right Circular Cone of Same Height and Same Radius is Cut Out. Find the surface area of the remaining solid?

20. A right circular cylinder with radius 6cm and height 14 cm is cut into 2 equal parts

If cut parallel to its base then change in the surface area	If cut is perpendicular to its base then change in the surface area

21. A conical vessel, whose internal radius is 12 cm and height 50 cm, is full of some liquid. The contents of this vessel are emptied into a cylindrical vessel with an internal radius of 10 cm. Find the height to which the liquid rises in the cylindrical vessel.
(A) 22 cm (B) 23 cm (C) 24 cm (D) 25 cm

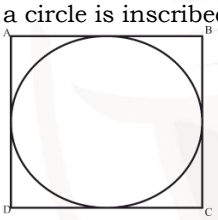
22. If diagonals of a Rhombus are 24cm and 32cm then find the perimeter of the Rhombus?

23. Find the length of the longest rod that can be kept inside the cylinder formed by folding a square of side 10cm?

24. A cube of side 7cm is painted blue and then cut into small identical cubes each of side 1 cm. How many small cubes have exactly 1 face painted?

Circle

25. AB = 20cm, CD = 15cm, BC = 17cm then find AD, if a circle is inscribed in a Quadrilateral ABCD.

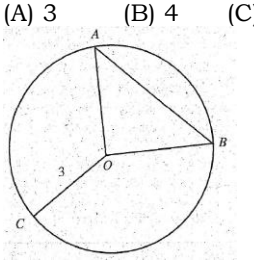


26. A regular hexagon with longest diagonal 8 cm is inscribed in a circle. Find the area of circle?

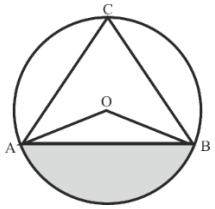
27. Find the maximum area of a quadrilateral which is inscribed in a circle of radius 8cm?

28. Find the length of chord which is 7cm from the center of the circle with radius 25cm

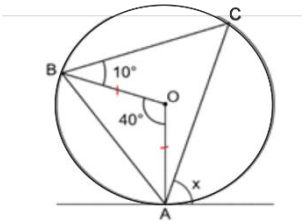
29. In the circle shown in the figure the length of the arc ACB is 3 times the length of the arc AB. What is the length of the line segment AB?
(A) 3 (B) 4 (C) 5 (D) $2\sqrt{3}$ (E)$3\sqrt{2}$



30. In ΔABC $\angle ACB = 15°$ then find the area of shaded region if radius of the circle is 42cm.



31. Find x?



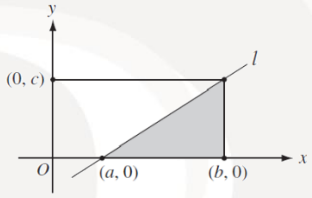
Co-ordinate Geometry

32. If line L_1 with equation $2x+3y=10$, intersect perpendicular line L_2 at the point (5,6) then find the equation of L_2?

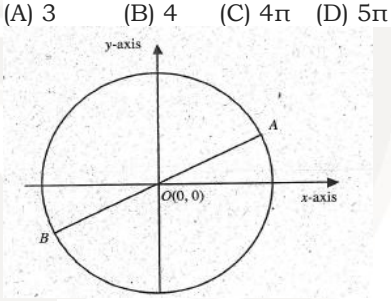
33. Find the slope, x –intercept and y-intercept of a line $x+3y = 63$

34. Lines l_1 and l_2 are parallel and equation of l_1 is $2x+9y=30$, then find the equation of l_2 if it passes through the point (2,7)?

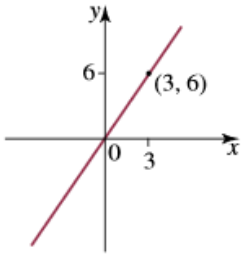
35. In the figure, Find the area of shaded triangle.



36. In the figure shown AB is a diameter of the circle and O is the center of the circle. If A = (3, 4), then what is the circumference of the circle?
(A) 3 (B) 4 (C) 4π (D) 5π (E) 10π



37. Find the equation of the given line?



38. Find the radius and center of the circle if equation of circle is $2x^2+2y^2+16x-20y-46 = 0$?

39. Point P (5,5) divides line segment AB in what ratio if A(7,7) and B(9,9)

40. Find distance between 2 parallel lines with equations 4x+9y = 20, 8x+18y = 34

1. 24	11. 108	21. C	31. 80
2. 135, 45	12. $\frac{5-x}{10}$	22. 80	32. $3x - 2y = 3$
3. A	13. $120\sqrt{3}$	23. $\sqrt{10^2 + \frac{10^2}{\Pi^2}}$	33. $slope = -1/3$ $X\ intercept = 63$ $Y\ intercept = 21$
4. $52 < P < 72$	14. E	24. 150	34. $2x + 9y = 67$
5. $\frac{75\sqrt{3}}{4}$	15. C	25. 18	35. $\frac{1}{2}c(b-a)$
6. D	16. $4\sqrt{5}$	26. 16Π	36. E
7. 16	17. 350	27. 128	37. $y = 2x$
8. 30	18. D $40cm$, $0.4m$	28. 48	38. 8
9. 3	19. 5.6Π	29. E	39. 1 : 2 *Externally*
10. 4 : 49	20. B	30. $147(\Pi - 3)$	40. $\frac{3}{\sqrt{97}}$