



MATHS

BOOKS - RD SHARMA MATHS (ENGLISH)

THE CIRCLE

Others

1. Find the equation of the circle whose centre is at the point $(4, 5)$ and which passes through the centre of the circle $x^2 + y^2 - 6x + 4y - 12 = 0$.



Watch Video Solution

2. Find the equation of the circle passing through $(1, 0)$ and $(0, 1)$ and having the smallest possible radius.

 [Watch Video Solution](#)

3. If $(-3, 2)$ lie on the circle $x^2 + y^2 + 2gx + 2fy + c = 0$ which is concentric with the circle $x^2 + y^2 + 6x + 8fy - 5 = 0$, then $c =$
(a) 11 (b) -11 (c) 24 (d) 32

 [Watch Video Solution](#)

4. Find the equation of the circle drawn on the intercept made by the line $2x + 3y = 6$ between the coordinate axes as diameter.

 [Watch Video Solution](#)

5. The straight line $\frac{x}{a} + \frac{y}{b} = 1$ cuts the coordinate axes at A and B . Find the equation of the circle passing through $O(0, 0)$, A and B .

 [Watch Video Solution](#)

6. Find the equation of the circle that passes through the points $(1, 0)$, $(-1, 0)$ and $(0, 1)$.

 [Watch Video Solution](#)

7. The circle $x^2 + y^2 + 2gx + 2fy + c = 0$ does not intersect x-axis, if (a) $g^2 < c$ (b) $g^2 > c$ (c) $g^2 < 2c$ (d) none of these

 [Watch Video Solution](#)

8. If the lines $3x - 4y + 4 = 0$ and $6x - 8y - 7 = 0$ are tangents to a circle, then find the radius of the circle.

 [Watch Video Solution](#)

9. Show that the point (x, y) given by $x = \frac{2at}{1+t^2}$ and $y = \left(\frac{1-t^2}{1+t^2}\right)$ lies on a circle for all real values of t such that $-1 \leq t \leq 1$, where a is any given real number.

 [Watch Video Solution](#)

10. If the line $lx + my - 1 = 0$ touches the circle $x^2 + y^2 = a^2$, then prove that (l, m) lies on a circle.

 [Watch Video Solution](#)

11. Find the radius of the circle

$$(x \cos \alpha + y \sin \alpha - a)^2 + (x \sin \alpha - y \cos \alpha - b)^2 = k^2, \text{ if } \alpha$$

varies, the locus of its centre is again a circle. Also, find its centre and radius.

 [Watch Video Solution](#)

12. Find the equation to the circle which passes through the origin and cut off equal chords of length ' a ' from the straight lines $y = x$ and $y = -x$.

 [Watch Video Solution](#)

13. On the joining $(1, 0)$ and $(3, 0)$ an equilateral triangle is drawn, having its vertex in the first quadrant. Find the equation to the circles described on its sides as diameter.

 [Watch Video Solution](#)

14. If the point $(k+1, k)$ lies inside the region bound by the curve $x = \sqrt{25 - y^2}$ and the y-axis, then the integral value of k is/are

 [Watch Video Solution](#)

15. If the point $(2, k)$ lies outside the circles $x^2 + y^2 + x - 2y - 14 = 0$ and $x^2 + y^2 = 13$ then k lies in the interval (a) $(-3, -2) \cup (3, 4)$ (b) $(-3, 4)$ (c) $(-\infty, -3) \cup (4, \infty)$ (d) $(-\infty - 2) \cup (3, \infty)$

 [Watch Video Solution](#)

16. A circle has radius 3 units and its centre lies on the line $y = x - 1$. Find the equation of the circle, if it passes through $(7, 3)$.



[Watch Video Solution](#)

17. Find the equation of the circle which touches both the axes and the line $3x - 4y + 8 = 0$ and lies in the third quadrant.



[Watch Video Solution](#)

18. A circle of radius 2 lies in the first quadrant and touches both the axes. Find the equation of the circle with centre at $(6, 5)$ and touching the above circle externally.



[Watch Video Solution](#)

19. Find the equation of a circle of radius 5 which lies within the circle $x^2 + y^2 + 14x + 10y - 26 = 0$ and which touches the given circle at the point $(-1, 3)$.



 [Watch Video Solution](#)

20. Find the equation of the circle whose radius is 5 and which touches the circle $x^2 + y^2 - 2x - 4y - 20 = 0$ externally at the point (5, 5).

 [Watch Video Solution](#)

21. The circle $(x - a)^2 + (y - a)^2 = a^2$ is rolled on the y -axis in the positive direction through one complete revolution. Find the equation of the circle in its new-position.

 [Watch Video Solution](#)

22. Find the equation of the image of the circle $x^2 + y^2 + 8x - 16y + 64 = 0$ in the line mirror $x = 0$.

 [Watch Video Solution](#)

23. A circle of radius 5 units touches the coordinate axes in the first quadrant. If the circle makes one complete roll on x -axis along the positive direction of x -axis, find its equation in new position.



Watch Video Solution

24. Find the equation of a circle which passes through the point $(2, 0)$ and whose centre is the limit of the point of intersection of the lines $3x + 5y = 1$ and $(2 + c)x + 5c^2y = 1$ as c tends to 1 .



Watch Video Solution

25. Find the equation of a circle which touches y - axis at a distance of 4 units from the origin and cuts an intercept of 6 units along the positive direction of x - axis.



 [Watch Video Solution](#)

26. If the circle $x^2 + y^2 + 2ax + 8y + 16 = 0$ touch x -axis ,
then, the value of a is $(a) + 16(b) + 4(c) + 8(d) + 1$

 [Watch Video Solution](#)

27. If the abscissae and the ordinates of two point A and B be the roots of $ax^2 + bx + c = 0$ and $a'y^2 + b'y + c' = 0$ respectively, show that the equation of the circle described on AB as diameter is $aa'(x^2 + y^2) + a'bx + ab'y + (ca' + ca) = 0$.

 [Watch Video Solution](#)

28. Find the equation of the circle which passes through the points $(2, -2)$, and $(3,4)$ and whose centre lies on the line $x + y = 2$.

 [Watch Video Solution](#)

29. If $2x^2 + \lambda xy + 2y^2 + (\lambda - 4)x + 6y - 5 = 0$, is the equation of a circle, then its radius is :

 [Watch Video Solution](#)

30. If the equation of a circle is $\lambda x^2 + (2\lambda - 3)y^2 - 4x + 6y - 1 = 0$, then the coordinates of centre are

 [Watch Video Solution](#)

31. If the line $lx + my + n = 0$ touches the circle $x^2 + y^2 = a^2$, then prove that $(l^2 + m^2)a^2 = n^2$.

 [Watch Video Solution](#)

32. Find the equation of the circle which passes through the origin and cut off equal chords of $\sqrt{2}$ units from the lines $y = x$ and $y = -x$.

 [Watch Video Solution](#)

33. Prove that the locus of a point which moves such that the sum of the square of its distances from the vertices of a triangle is constant is a circle having centre at the centroid of the triangle.

 [Watch Video Solution](#)

34.  

Watch Video Solution

35. A dip circle is at right angles to the magnetic meridian. What will be the apparent dip ?



[Watch Video Solution](#)

36. Find the equation to the circle which passes through the points $(1, 2)$ and $(2, 2)$ and whose radius is 1.



[Watch Video Solution](#)

37. Find the equation of the circle, the coordinates of the end points of whose diameter are $(-1, 2)$ and $(4, -3)$.



[Watch Video Solution](#)

38. If the circles $x^2 + y^2 + 2ax + c = 0$ and $x^2 + y^2 + 2by + c = 0$ touch each other, then (a) $\frac{1}{a^2} + \frac{1}{b^2} = \frac{1}{c}$ (b) $\frac{1}{a^2} + \frac{1}{b^2} = \frac{1}{c^2}$ (c) $a + b = 2c$ (d) $\frac{1}{a} + \frac{1}{b} = \frac{2}{c}$

 [Watch Video Solution](#)

39. Find the equation of the circle which passes through the points $(1, -2)$, $(4, -3)$ and whose center lies on the line $3x + 4y = 7$.

 [Watch Video Solution](#)

40. The equation of the circle which touches the axes of coordinates and the line $\frac{x}{3} + \frac{y}{4} = 1$ and whose centres lie in the first quadrant is $x^2 + y^2 - 2cx - 2cy + c^2 = 0$, where c is equal to 4 (b) 2 (c) 3 (d) 6

 [Watch Video Solution](#)

41. Find the equation of the circle which passes through the points $(2, 3)$ and $(4, 2)$ and the centre lies on the straight line $y - 4x + 3 = 0$.



Watch Video Solution

42. The number of integral values of λ for which the equation $x^2 + y^2 + \lambda x + (1 - \lambda)y + 5 = 0$ is the equation of a circle whose radius cannot exceed 5, is (a) 14 (b) 18 (c) 16 (d) none of these



Watch Video Solution

43. Find the equation of the circle which touches the lines $4x - 3y + 10 = 0$ and $4x - 3y - 30 = 0$ and whose centre lies on the line $2x + y = 0$.



Watch Video Solution

44. If the line $y = \sqrt{3}x + k$ touches the circle $x^2 + y^2 = 16$, then find the value of k .

 [Watch Video Solution](#)

45. Find the equation of the circle having $(1, -2)$ as its centre and passing through the intersection of the lines $3x + y = 14$ and $2x + 5y = 18$.

 [Watch Video Solution](#)

46. Find the locus of the centre of the circle touching the line $x + 2y = 0$ and $x = 2y$

 [Watch Video Solution](#)

47. Let C be any circle with centre $(0, \sqrt{2})$. Prove that at most two rational points can be there on C . (A rational point is a point both of whose coordinates are rational numbers)



[Watch Video Solution](#)

48. Find the equation of the circle which touches x-axis and whose centre is $(1,2)$.



[Watch Video Solution](#)

49. Find the equation of the circle which passes through the origin and cuts off intercepts 3 and 4 from the positive parts of the axes respectively.



[Watch Video Solution](#)

50. Find the equation of the circle whose centre is at $(3, -1)$ and which cuts off a chord of length 6 units on the line $2x - 5y + 18 = 0$.



Watch Video Solution

51. A rectangle $ABCD$ is inscribed in a circle with a diameter lying along the line $3y = x + 10$. If A and B are the points $(-6, 7)$ and $(4, 7)$ respectively, find the area of the rectangle and equation of the circle.



Watch Video Solution

52. Find the equation of a circle with origin as centre and which circumscribes an equilateral triangle whose median is of length $3a$.



Watch Video Solution

53. Find the equation of a circle whose diameters are $2x - 3y + 12$ and $x + 4y - 5 = 0$ and area is 154 square units.



Watch Video Solution

54. Find the equation of a circle of radius 5 whose centre lies on x-axis and passes through the point $(2,3)$.



Watch Video Solution

55. If $y = 2x$ is a chord of the circle $x^2 + y^2 - 10x = 0$, find the equation of a circle with this chord as diameter.



Watch Video Solution

56. Find the equation of the circle is $(2, -3)$ and radius is 8 .



Watch Video Solution

57. Find the equation of the circle which passes through the point of intersection of the lines $3x - 2y - 1 = 0$ and $4x + y - 27 = 0$ and whose centre is $(2, -3)$.



Watch Video Solution

58. Find the equation of the circle having centre at $(3, -4)$ and touching the line $5x + 12y - 12 = 0$.



Watch Video Solution

59. Find the center and radius of the circle given by the equation $2x^2 + 2y^2 + 3x + 4y + \frac{9}{8} = 0$.



Watch Video Solution

60. If the line $2x - y + 1 = 0$ touches the circle at the point $(2, 5)$ and the centre of the circle lies in the line $x + y - 9 = 0$. Find the equation of the circle.



Watch Video Solution

61. Find the equation of the circle passing through $(1, 2)$ and which is concentric with the circle $x^2 + y^2 + 11x - 5y + 3 = 0$.



Watch Video Solution

62. Find the equation of a circle whose centre is $(2, -3)$ and radius 5.



Watch Video Solution

63. If the equations of the two diameters of a circle are $x - y = 5$ and $2x + y = 4$ and the radius of the circle is 5, find the equation of the circle.



Watch Video Solution

64. Find the equation of the circle which passes through two points on the x-axis which are at distances 4 from the origin and whose radius is 5.



Watch Video Solution

65. A circle of radius 6 units touches the coordinates axes in the first quadrant. Find the equation of its image in the line mirror $y = 0$.



Watch Video Solution

66. Show that the equation of the circle which touches the coordinate axes whose centre lies on the line

$$lx + my + n = 0 \text{ is } (l + m)^2(x^2 + y^2) + 2n(x + y)(l + m) + n^2 = 0.$$



Watch Video Solution

67. Find the equation of the circle which touches the coordinate axes and whose centre lies on the line $x - 2y = 3$.



Watch Video Solution

68. Find the equation of the circle with: centre $(-2, 3)$ and radius 4.



Watch Video Solution

69. Find the equation of the circle with: centre (a, b) and radius

$$\sqrt{a^2 + b^2}.$$



[Watch Video Solution](#)

70. Find the equation of the circle with: centre $(0,-1)$ and radius 1.



[Watch Video Solution](#)

71. Find the equation of the circle with: Center $(a \cos \alpha, a \sin \alpha)$ and radius a .



[Watch Video Solution](#)

72. Find the equation of the circle with: Centre (a, a) and radius $\sqrt{2}a$.



[Watch Video Solution](#)

73. Find the centre and radius of each of the following circle:

$$(x - 1)^2 + y^2 = 4$$



Watch Video Solution

74. Find the centre and radius of each of the following circle:

$$(x + 5)^2 + (y + 1)^2 = 9$$



Watch Video Solution

75. Find the centre and radius of each of the following circle:

$$x^2 + y^2 - 4x + 6y = 5$$



Watch Video Solution

76. Find the centre and radius of each of the following circle:

$$x^2 + y^2 - x + 2y - 3 = 0$$



Watch Video Solution

77. Find the equation of the circle whose centre is (1,2) and which passes through the point (4,6).



Watch Video Solution

78. Find the equation of the circle passing through the point of intersection of the lines $x + 3y = 0$ and $2x - 7y = 0$ and whose centre is the point of intersection of the lines $x + y + 1 = 0$ and $x - 2y + 4 = 0$.



Watch Video Solution

79. Find the equation of the circle whose centre lies on the positive direction of y-axis at a distance 6 from the origin and whose radius is 4.

 [Watch Video Solution](#)

80. Find the equation of a circle: 1) Which touches both the axes at a distance of 6 units from the origin. 2) Which touches x-axis at a distance 5 from the origin and radius 6 units 3) Which touches both the origin, radius 17 and ordinate of the centre is -15.

 [Watch Video Solution](#)

81. If the equations of two diameters of a circle are $x + y = 6$ and $x + 2y = 4$ and the radius is 10, find the equation of the circle.

 [Watch Video Solution](#)

82. Find the equation of the circle which has its centre at the point $(3,4)$ and touches the straight line $5x + 12y - 1 = 0$.

 [Watch Video Solution](#)

83. Find the equation of the circle which touches the coordinate axes and whose centre lies on the line $x-2y = 3$.

 [Watch Video Solution](#)

84. A circle whose centre is the point of intersection of the lines $2x - 3y + 4 = 0$ and $3x + 4y - 5 = 0$ passes through the origin. Find its equation.

 [Watch Video Solution](#)

85. A circle of radius 4 units touches the coordinate axes in the first quadrant. Find the equation of its images with respect to the line mirrors $x = 0$ and $y = 0$.



[Watch Video Solution](#)

86. Find the equations of the circles touching y-axis at (0,3) and making an intercept of 8 units on the x-axis.



[Watch Video Solution](#)

87. Find the equations of the circles passing through two points on y-axis at distance 3 from the origin and having radius 5.



[Watch Video Solution](#)

88. If the lines $3x - 4y - 7 = 0$ and $2x - 3y - 5 = 0$ are two diameters of a circle of area 49π square units, the equation of the circle is:



Watch Video Solution

89. The circle $x^2 + y^2 - 2x - 2y + 1 = 0$ is rolled along the positive direction of x-axis and makes one complete roll. Find its equation in new position.



Watch Video Solution

90. One of the diameters of the circle circumscribing the rectangle ABCD is $4y = x + y$. If A and B are the points $(-3, 4)$ and $(5, 4)$ respectively, find the area of the rectangle and equation of the circle.



Watch Video Solution

91. Find the centre of a circle passing through (5,-8), (2,-9) and (2,1)



Watch Video Solution

92. Find the area of equilateral triangle inscribed in a circle

$$x^2 + y^2 + 2gx + 2fy + c = 0$$



Watch Video Solution

93. Find the coordinates of the centre and radius of each of the

following circle: $x^2 + y^2 + 6x - 8y - 24 = 0$



Watch Video Solution

94. Find the coordinates of the centre and radius of each of the

following circle: $2x^2 + 2y^2 - 3x + 5y = 7$



[Watch Video Solution](#)

95. Find the coordinates of the centre and radius of each of the following circle: $\frac{1}{2}(x^2 + y^2) + x \cos \theta + y \sin \theta - 4 = 0$



[Watch Video Solution](#)

96. Find the coordinates of the centre and radius of each of the following circle: $x^2 + y^2 - ax - by = 0$



[Watch Video Solution](#)

97. Find the equation of the circle passing through the point: (5,1), (8, 1) and (1,3)



[Watch Video Solution](#)

98. Find the equation of the circle passing through the point: $(1, 2)$, $(3, -4)$ and $(5, -6)$.



Watch Video Solution

99. Find the equation of the circle passing through the point: $(5, -8)$, $(-2, 9)$ and $(2, 1)$



Watch Video Solution

100. about to only mathematics



Watch Video Solution

101. Find the equation of the circle which passes through the points $(3, -2)$, $(-2, 0)$ and has its centre on the line $2x - y = 3$.





Watch Video Solution

102. Find the equation of the circle which passes through the points $(3,7)$, $(5,5)$ and has its centre on the line $x - 4y = 1$.



Watch Video Solution

103. Show that the points $(3,-2)$, $(1,0)$, $(-1, -2)$ and $(1,-4)$ are con-cyclic.



Watch Video Solution

104. Show that the points $A(5, 5)$, $B(6, 4)$, $C(-2, 4)$ and $D(7, 1)$ all lies on the circle. Find the centre, radius and equation of circle.



Watch Video Solution

105. Find the equation of the circle which circumscribes the triangle formed by the line: $x + y + 3 = 0$, $x - y + 1 = 0$ and $x = 3$



[Watch Video Solution](#)

106. Find the equation of the circle which circumscribes the triangle formed by the line:
 $2x + y - 3 = 0$, $x + y - 1 = 0$ and $3x + 2y - 5 = 0$



[Watch Video Solution](#)

107. Prove that the centres of the three circles $(x^2 + y^2 - 4x - 6y - 12 = 0)$, $(x^2 + y^2 + 2x + 4y - 5 = 0)$ and $(x^2 + y^2 - 10x - 16y + 7 = 0)$ are collinear.



[Watch Video Solution](#)

108. Find the equation of the circle which circumscribes the triangle formed by the line: $x + y = 2$, $3x - 4y = 6$ and $x - y = 0$.

 [Watch Video Solution](#)

109. Find the equation of the circle which circumscribes the triangle formed by the line: $y = x + 2$, $3y = 4x$ and $2y = 3x$

 [Watch Video Solution](#)

110. Find the equation of the circle which passes through the origin and cuts off chords of lengths 4 and 6 on the positive side of the x-axis and y-axis respectively.

 [Watch Video Solution](#)

111. Find the equation of the circle concentric with the circle $x^2 + y^2 - 4x - 6y - 3 = 0$ and which touches the y axis



Watch Video Solution

112. If a circle passes through the point $(0, 0)$, $(a, 0)$ and $(0, b)$, then find its center.



Watch Video Solution

113. Find the equations of the circles drawn on the diagonals of the rectangle as its diameter whose sides are $x = 5$, $x = -2$, $y = 3$ and $y = -1$.



Watch Video Solution

114. Find the equation of the circle, the end points of whose diameter are (2,-3) and (-2,4). Find the centre and radius.



[Watch Video Solution](#)

115. Find the equation of the circle the end points of whose diameters are the centres of the circles $x^2 + y^2 + 16x - 14y = 1$ and $x^2 + y^2 - 4x + 10y = 2$



[Watch Video Solution](#)

116. The sides of a square are $x = 6$, $x = 9$, $y = 3$ and $y = 6$. Find the equation of a circle drawn on the diagonal of the square as its diameter.



[Watch Video Solution](#)

117. Find the equation of the circle circumscribing the rectangle whose sides are $x - 3y = 4$, $3x + y = 32$, $x - 3y = 14$ and $3x + y = 62$.



[Watch Video Solution](#)

118. Find the equation of the circle passing through the origin and the points where the line $3x + 4y = 12$ meets the axes of coordinates.



[Watch Video Solution](#)

119. Find the equation of the circle which passes through the origin and cuts off intercepts a and b respectively from x and y - axes.



[Watch Video Solution](#)

120. Find the equation of the circle whose diameter is the line segment joining $(-4,3)$ and $(12,-1)$. Find also the intercept made by it on y -axis.



[Watch Video Solution](#)

121. The abscissa of the two points A and B are the roots of the equation $x^2 + 2ax - b^2 = 0$ and their ordinates are the roots of the equation $x^2 + 2px - q^2 = 0$. Find the equation of the circle with AB as diameter. Also, find its radius.



[Watch Video Solution](#)

122. $ABCD$ is a square in first quadrant whose side is a , taking AB and AD as axes, prove that the equation to the circle circumscribing the square is $x^2 + y^2 = a(x + y)$.



[Watch Video Solution](#)

123. The line $2x - y + 6 = 0$ meets the circle $x^2 + y^2 - 2y - 9 = 0$ at A and B. Find the equation of the circle on AB as diameter.



[Watch Video Solution](#)

124. Find the equation of the circle which circumscribes the triangle formed by the lines $x = 0$, $y = 0$ and $lx + my = 1$.



[Watch Video Solution](#)

125. Write the length of the intercept made by the circle $x^2 + y^2 + 2x - 4y - 5 = 0$ on y-axis.



[Watch Video Solution](#)

126. Write the coordinates of the centre of the circle passing through (0,0), (4,0) and (0,-6).



[Watch Video Solution](#)

127. Write the area of the circle passing through (-2, 6) and having its centre at (1,2).



[Watch Video Solution](#)

128. If the abscissa and ordinates of two points P and Q are the roots of the equations $x^2 + 2ax - b^2 = 0$ and $x^2 + 2px - q^2 = 0$, respectively, then find the equation of the circle with PQ as diameter.



[Watch Video Solution](#)

129. Write the equation of the unit circle concentric with $x^2 + y^2 - 8x + 4y - 8 = 0$.



[Watch Video Solution](#)

130. Find the number of integral values of λ for which $x^2 + y^2 + \lambda x + (1 - \lambda)y + 5 = 0$ is the equation of a circle whose radius does not exceed 5.



[Watch Video Solution](#)

131. Write the equation of the circle passing through (3,4) and touching y-axis at the origin.



[Watch Video Solution](#)

132. If the line $y = mx$ does not intersect the circle $(x + 10)^2 + (y + 10)^2 = 180$ then write the set of values of taken by m .



Watch Video Solution

133. Write the coordinates of the center of the circle inscribed in the square formed by the lines $x = 2$, $x = 6$, $y = 5$ and $y = 9$.



Watch Video Solution

134. The equation $x^2 + y^2 + 2x - 4y + 5 = 0$ represents a. a point b. a pair of straight lines c. a circle of non zero radius d. none of these



Watch Video Solution

135. If the equation $(4a - 3)x^2 + ay^2 + 6x - 2y + 2 = 0$ represents a circle, then its centre is a. (3,-1) b. (3,1) c. (-3,1) d. none of these



Watch Video Solution

136. The equation of the circle passing through the point (1, 1) and having two diameters along the pair of lines $x^2 - y^2 - 2x + 4y - 3 = 0$ is a. $x^2 + y^2 - 2x - 4y + 4 = 0$ b. $x^2 + y^2 + 2x + 4y - 4 = 0$ c. $x^2 + y^2 - 2x + 4y + 4 = 0$ d. none of these



Watch Video Solution

137. If the centroid of an equilateral triangle is (1,1) and its one vertex is (-1, 2), then the equation of its circumcircle is: a. $x^2 + y^2 - 2x - 2y - 3 = 0$ b. $x^2 + y^2 + 2x - 2y - 3 = 0$ c. $x^2 + y^2 + 2x + 2y - 3 = 0$ d. none of these



[Watch Video Solution](#)

138. The equation of the incircle of the triangle formed by the axes and the line $4x+3y=6$ is



[Watch Video Solution](#)

139. The equation of a circle with radius 5 and touching both the coordinate axes is

$$x^2 + y^2 \pm 10x \pm 10y + 5 = 0$$

$$x^2 + y^2 \pm 10x \pm 10y = 0$$

$$x^2 + y^2 \pm 10x \pm 10y + 25 = 0$$

$$x^2 + y^2 \pm 10x \pm 10y + 51 = 0$$



[Watch Video Solution](#)

140. The equation of the circle passing through the origin which cuts of intercept of length 6 and 8 from the axes is a.

$x^2 + y^2 - 12x - 16y = 0$ b. $x^2 + y^2 + 12x + 16y = 0$ c.

$x^2 + y^2 + 6x + 8y = 0$ d. $x^2 + y^2 - 6x - 8y = 0$



Watch Video Solution

141. The area of an equilateral triangle inscribed in the circle

$x^2 + y^2 - 6x - 8y - 25 = 0$ is a. $\frac{225\sqrt{3}}{6}$ b. 25π c. $50\pi - 100$ d. none

of these



Watch Video Solution

142. If the circles $x^2 + y^2 = a$ and $x^2 + y^2 - 6x - 8y + 9 = 0$ touch

externally then $a =$ a. 1 b. -1 c. 21 d. 16



Watch Video Solution

143. If $(x, 3)$ and $(3, 5)$ are the extremities of a diameter of a circle with centre at $(2, y)$ then the values of x and y are a. $(3, 1)$ b. $x = 4, y = 1$ c. $x = 8, y = 2$ d. none of these



Watch Video Solution

144. Equation of the diameter of the circle $x^2 + y^2 - 2x + 4y = 0$ which passes through the origin is a. $x+2y=0$ b. $x-2y=0$ c. $2x + y = 0$ d. $2x-y=0$.



Watch Video Solution

145. Equation of the circle through origin which cuts intercepts of length a and b on axes is a. $x^2 + y^2 = ax + by = 0$ b. $x^2 + y^2 - ax - by = 0$ c. $x^2 + y^2 + bx + ay = 0$ d. none of these



Watch Video Solution

