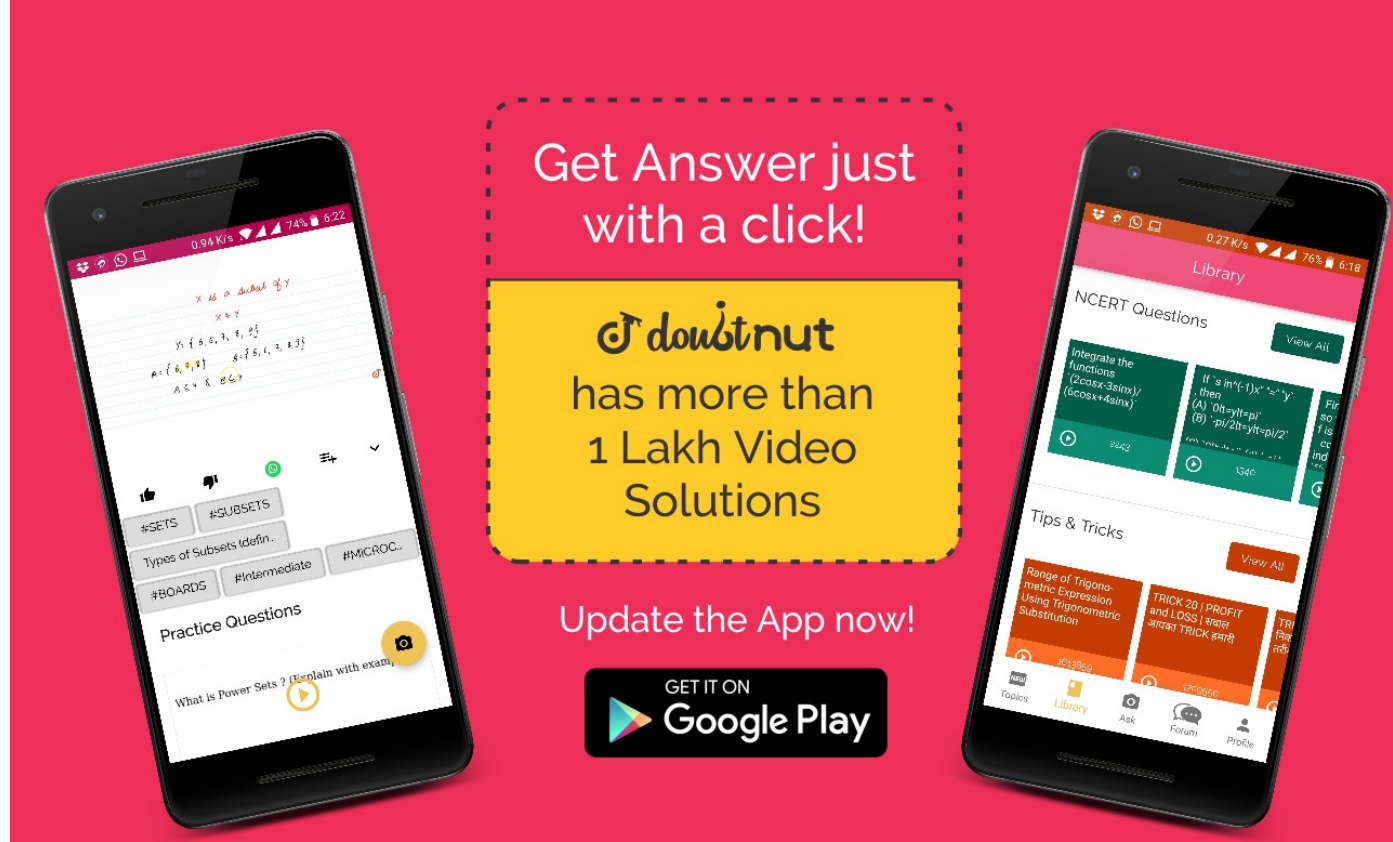| Ques No.	Question
1	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 1** Find the equation of the circle with centre : (0, 2) and radius 2 ▶ Watch Free Video Solution on Doubtnut
2	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 2** Find the equation of the circle with centre : $(-2, \quad 3)$ and radius 4 ▶ Watch Free Video Solution on Doubtnut
3	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 3** Find the equation of the circle with centre : $\left(\dfrac{1}{2}, \dfrac{1}{4}\right)$ and radius $\dfrac{1}{12}$ ▶ Watch Free Video Solution on Doubtnut
4	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 4** Find the equation of the circle with centre : (1, 1) and radius $\sqrt{2}$ ▶ Watch Free Video Solution on Doubtnut
5	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 5** Find the equation of the circle with centre : $(-a, \quad b)$ and radius $\sqrt{a^2 - b^2}$. ▶ Watch Free Video Solution on Doubtnut

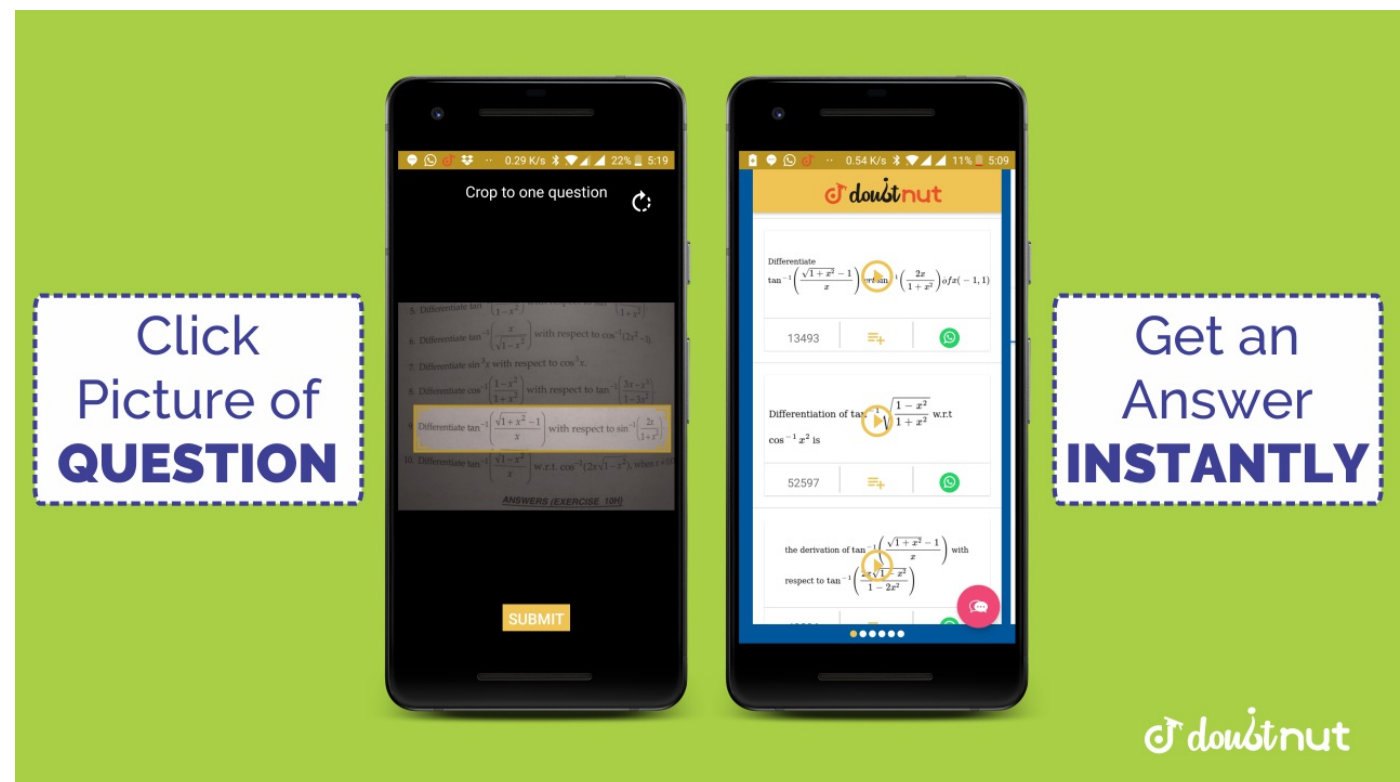|	
6	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 6** Find the centre and radius of the circles $(x+5)^2 + (y-3)^2$ $= 36$ ▶ Watch Free Video Solution on Doubtnut
7	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 7** Find the centre and radius of the circles $x^2 + y^2 - 4x - 8y$ $- 45 = 0$ ▶ Watch Free Video Solution on Doubtnut
8	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 8** Find the centre and radius of the circles $x^2 + y^2 - 8x + 10y$ $- 12 = 0$ ▶ Watch Free Video Solution on Doubtnut
9	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 9** Find the centre and radius of the circles $2x^2 + 2y^2 - x = 0$ ▶ Watch Free Video Solution on Doubtnut
	NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 10 Find the equation of the circle passing through the points (4, 1) and (6, 5) and whose centre is on the line

10	$4x + y = 16$. ▶ Watch Free Video Solution on Doubtnut
11	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 11** Find the equation of the circle passing through the points $(2, \quad 3)$ and $(-1, \quad 1)$ and whose centre is on the line $x - 3y - 11 = 0$. ▶ Watch Free Video Solution on Doubtnut
12	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 12** Find the equation of the circle with radius 5 whose centre lies on x–axis and passes through the point (2, 3). ▶ Watch Free Video Solution on Doubtnut
13	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 13** Find the equation of the circle passing through (0, 0) and making intercepts a and b on the coordinate axes. ▶ Watch Free Video Solution on Doubtnut
14	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 14** Find the equation of a circle with centre (2, 2) and passes through the point (4, 5). ▶ Watch Free Video Solution on Doubtnut
	NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.1 - Q 15

15	Does the point $(2, 5)$, $(3, 5)$ lie inside, outside or on the circle $x^2 + y^2 = 25$? ▶ **Watch Free Video Solution on Doubtnut**
16	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 1** Find the coordinates of the focus, axis of the parabola, the equation of the directrix and the length of the latus rectum. $y^2 = 12x \ x^2 = -16y y^2 = 10x$ ▶ **Watch Free Video Solution on Doubtnut**
17	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 2** Find the coordinates of the focus, axis of the parabola, the equation of the directrix and the length of the latus rectum. $x^2 = 6y$ ▶ **Watch Free Video Solution on Doubtnut**

18	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 3** Find the coordinates of the focus, axis of the parabola, the equation of the directrix and the length of the latus rectum. $y^2 = -8x$ ▶ **Watch Free Video Solution on Doubtnut**
19	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 4** Find the coordinates of the focus, axis of the parabola, the equation of the directrix and the length of the latus rectum. $x^2 = -16y$ ▶ **Watch Free Video Solution on Doubtnut**
20	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 5** Find the coordinates of the focus, axis of the parabola, the equation of the directrix and the length of the latus rectum. $y^2 = 10x$

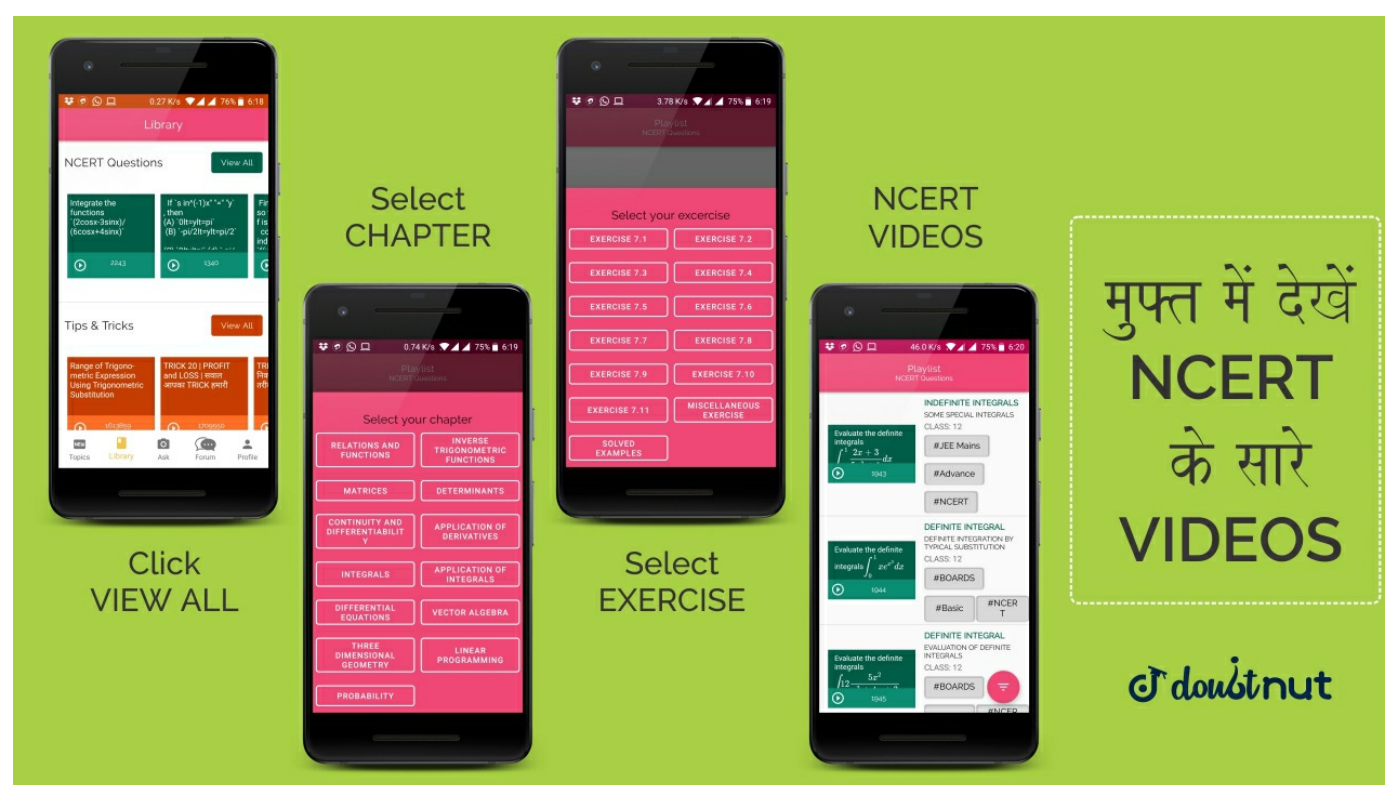|	
21	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 6** Find the coordinates of the focus, axis of the parabola, the equation of the directrix and the length of the latus rectum. $x^2 = -9y$
22	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 7** Find the equation of the parabola that satisfies the given conditions: Focus $(6, \quad 0)$; directrix $x \quad = \quad 6$
23	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 8** Find the equation of the parabola that satisfies the given conditions: Focus $(0, \quad 3)$; directrix $y \quad = \quad 3$
24	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 9** Find the equation of the parabola that satisfies the given conditions: Vertex (0, 0); focus (3,0)
25	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 10** Find the equation of the parabola that satisfies the given conditions: Vertex (0, 0); focus $(2, 0)$

26	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 11** Find the equation of the parabola that satisfies the given conditions: Vertex (0,0) passing through (2,3) arid axis is along x–axis. ▶ Watch Free Video Solution on Doubtnut
27	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.2 - Q 12** Find the equation of the parabola that satisfies the given conditions: Vertex (0, 0), passing through (5, 2) and symmetric with respect to y–axis. ▶ Watch Free Video Solution on Doubtnut
28	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 1** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse. $\dfrac{x^2}{36} + \dfrac{y^2}{16} = 1$ ▶ Watch Free Video Solution on Doubtnut
29	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 2** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse. $\dfrac{x^2}{4} + \dfrac{y^2}{25} = 1$ ▶ Watch Free Video Solution on Doubtnut

30	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 3** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse. $\dfrac{x^2}{16} + \dfrac{y^2}{9} = 1$

31	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 4** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse. $\dfrac{x^2}{25} + \dfrac{y^2}{100} = 1$
32	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 5** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse. $\dfrac{x^2}{49} + \dfrac{y^2}{36} = 1$
33	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 6** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse. $\dfrac{x^2}{100} + \dfrac{y^2}{400} = 1$
34	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 7** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse. $36x^2 + 4y^2 = 144$
35	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 8** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse. $16x^2 + y^2 = 16$

36	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 9** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse. $4x^2 + 9y^2 = 36$ ▶ Watch Free Video Solution on Doubtnut
37	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 10** Find the equation for the ellipse that satisfies the given conditions: Vertices $(\pm 5, 0)$, foci $(\pm 4, 0)$ ▶ Watch Free Video Solution on Doubtnut
38	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 11** Find the equation for the ellipse that satisfies the given conditions: Vertices $(0, \pm 13)$, foci $(0, \pm 5)$ ▶ Watch Free Video Solution on Doubtnut
39	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 12** Find the equation for the ellipse that satisfies the given conditions: Vertices $(\pm 6, 0)$, foci $(\pm 4, 0)$ ▶ Watch Free Video Solution on Doubtnut
40	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 13** Find the equation for the ellipse that satisfies the given conditions: Ends of major axis $(\pm 3, 0)$, ends of minor axis $(0, \pm 2)$ ▶ Watch Free Video Solution on Doubtnut
	NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 14

41	Find the equation for the ellipse that satisfies the given conditions: Ends of major axis $\left(0, \pm\sqrt{5}\right)$, ends of minor axis $(\pm 1, 0)$ ▶ Watch Free Video Solution on Doubtnut

NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 15

Find the equation for the ellipse that satisfies the given conditions: Length of major axis 26, foci $(\pm 5, 0)$

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NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 16

Find the equation for the ellipse that satisfies the given conditions: Length of minor axis 16, foci $(0, \pm 6)$.

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NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 17

Find the equation for the ellipse that satisfies the given conditions: Foci $(\pm 3, 0), a = 4$

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NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 18

Find the equation for the ellipse that satisfies the given conditions: b = 3, c = 4, centre at the origin; foci on a x axis.

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NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 19

Find the equation for the ellipse that satisfies the given conditions: Centre at (0, 0),

| 46 | major axis on the y–axis and passes through the points (3, 2) and (1, 6).
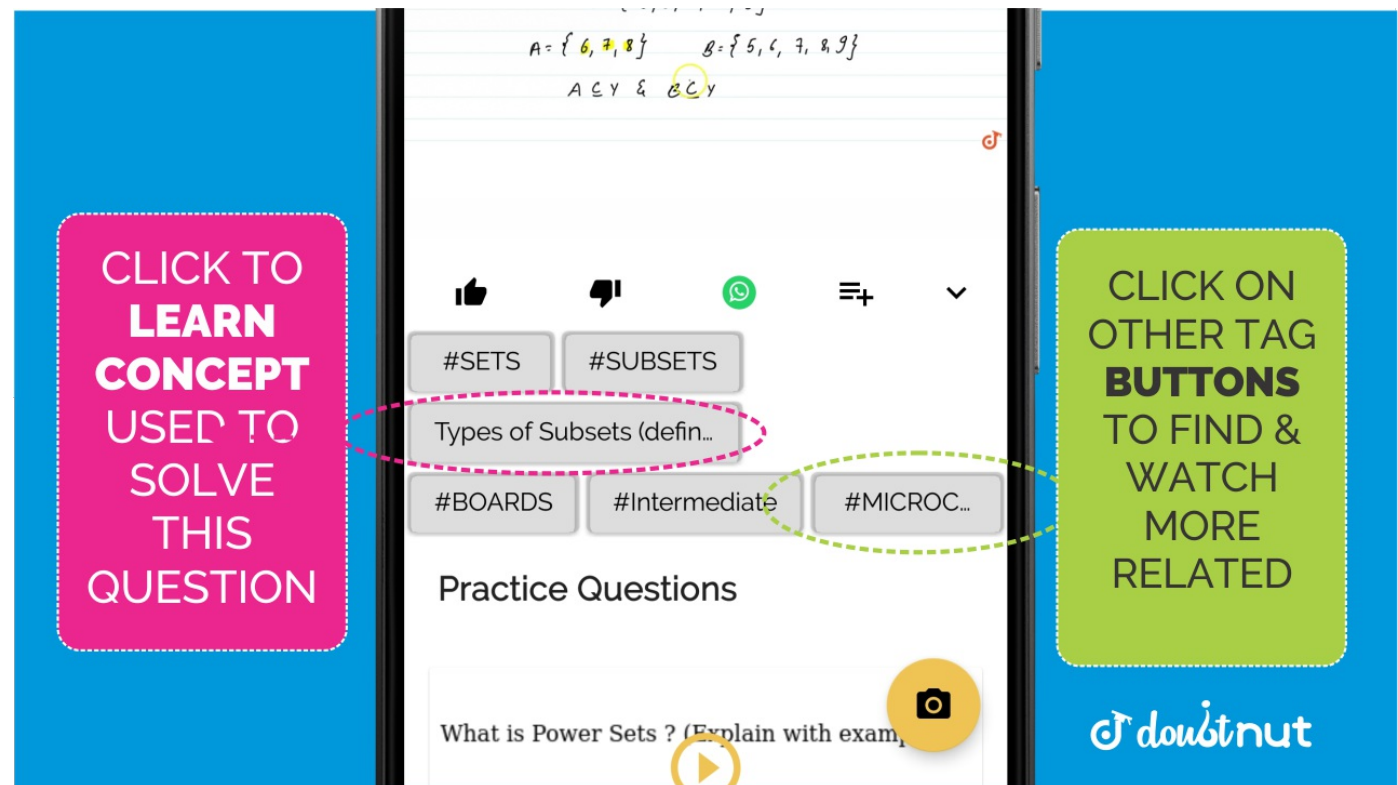
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|---|---|
| 47 | **NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.3 - Q 20**

Find the equation for the ellipse that satisfies the given conditions: Major axis on the x–axis and passes through the points (4, 3) and (6, 2).

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| | |
| 48 | **NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 1**

Find the coordinates of the foci and the vertices, the eccentricity and the length of the latus rectum of the hyperbolas. $\dfrac{x^2}{16} - \dfrac{y^2}{9} = 1$

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| 49 | **NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 2**

Find the coordinates of the foci and the vertices, the eccentricity and the length of the latus rectum of the hyperbolas. $\dfrac{y^2}{9} - \dfrac{x^2}{27} = 1$

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| 50 | **NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 3**

Find the coordinates of the foci and the vertices, the eccentricity and the length of the latus rectum of the hyperbolas. $9y^2 - 4x^2 = 36$

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| | **NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 4** |

51	Find the coordinates of the foci and the vertices, the eccentricity and the length of the latus rectum of the hyperbolas. $16x^2 - 9y^2 = 576$ ► Watch Free Video Solution on Doubtnut
52	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 5** Find the coordinates of the foci and the vertices, the eccentricity and the length of the latus rectum of the hyperbolas. $5y^2 - 9x^2 = 36$ ► Watch Free Video Solution on Doubtnut
53	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 6** Find the coordinates of the foci and the vertices, the eccentricity and the length of the latus rectum of the hyperbolas. $49y^2 - 16x^2 = 784$ ► Watch Free Video Solution on Doubtnut
54	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 7** Find the equations of the hyperbola satisfying the given conditions : Vertices $(\pm 2, 0)$, f o c i $(\pm 3, 0)$ ► Watch Free Video Solution on Doubtnut
55	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 8** Find the equations of the hyperbola satisfying the given conditions : Vertices $(0, \pm 5)$, f o c i $(0, \pm 8)$ ► Watch Free Video Solution on Doubtnut

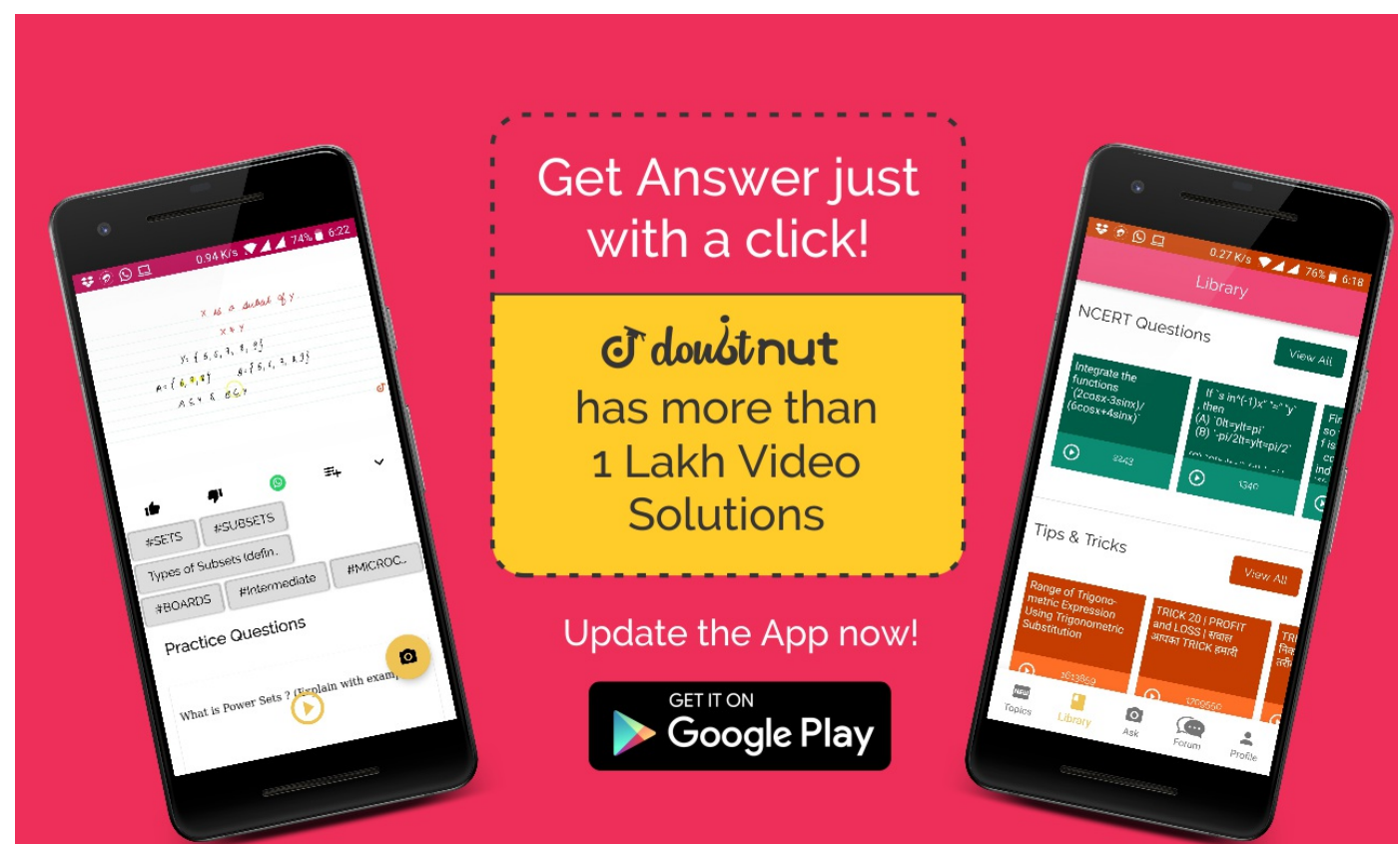|	
56	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 9** Find the equations of the hyperbola satisfying the given conditions : Vertices $(0, \pm 3)$, foci $(0, \pm 5)$ ▶
57	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 10** Find the equations of the hyperbola satisfying the given conditions : Foci $(\pm 5, 0)$, the transverse axis is of length 8. ▶
58	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 12** Find the equations of the hyperbola satisfying the given conditions : Foci $(\pm 3\sqrt{5}, 0)$, the latus rectum is of length 8. ▶
59	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 13** Find the equations of the hyperbola satisfying the given conditions : Foci $(\pm 4, 0)$, the latus rectum is of length 12 ▶

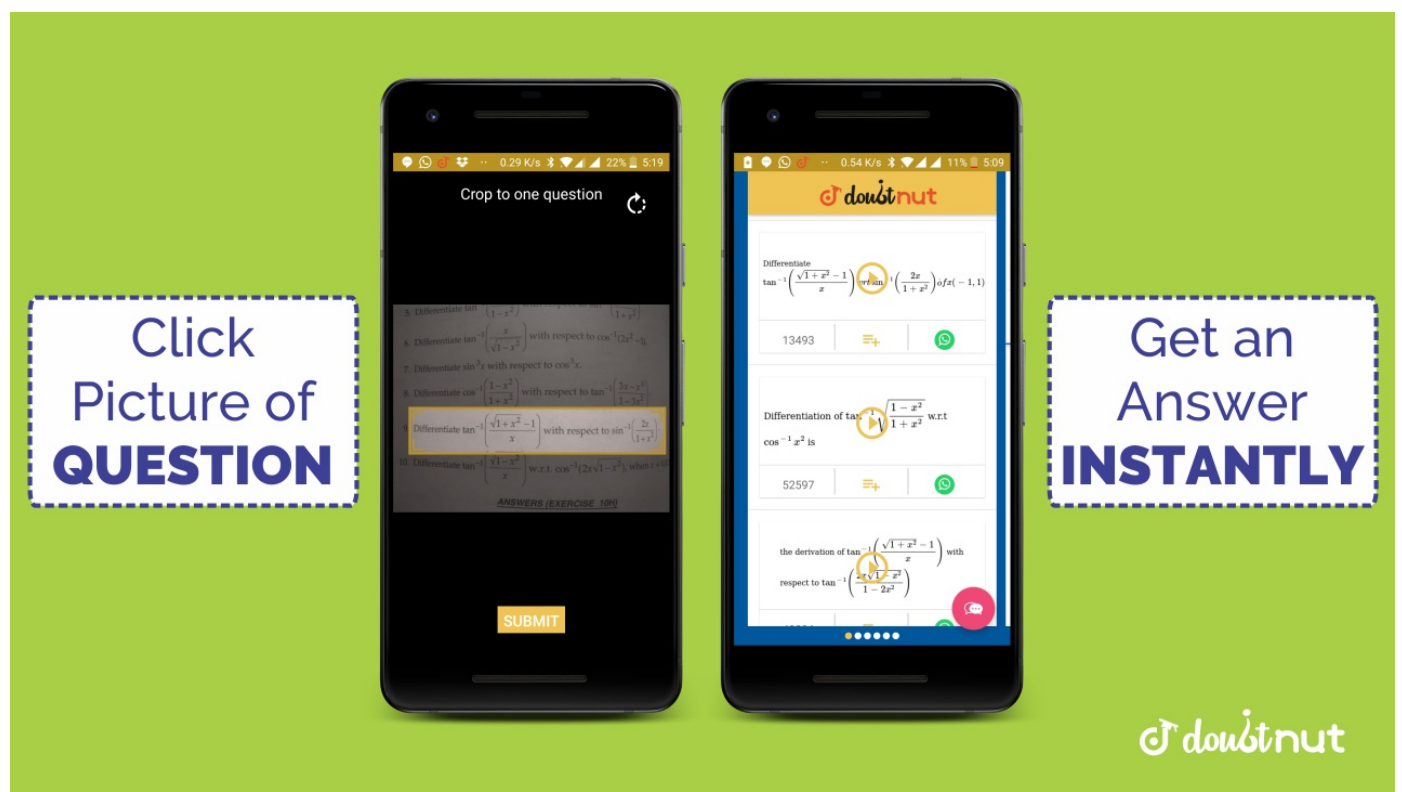|	
60	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 14** Find the equations of the hyperbola satisfying the given conditions : Vertices $(\pm 7, 0)$, $e = \dfrac{4}{3}$ ▶ Watch Free Video Solution on Doubtnut
61	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - EXERCISE 11.4 - Q 15** Find the equations of the hyperbola satisfying the given conditions : Foci $(0, \pm \sqrt{10})$, passing through (2,3) ▶ Watch Free Video Solution on Doubtnut
62	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - MISCELLANEOUS EXERCISE - Q 1** If a parabolic reflector is 20 cm in diameter and 5 cm deep, find the focus. ▶ Watch Free Video Solution on Doubtnut
63	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - MISCELLANEOUS EXERCISE - Q 2** An arch is in the form of a parabola with its axis vertical. The arch is 10 m high and 5 m wide at the base. How wide is it 2 m from the vertex of the parabola? ▶ Watch Free Video Solution on Doubtnut
64	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - MISCELLANEOUS EXERCISE - Q 3** The cable of a uniformly loaded suspension bridge hangs in the form of a parabola. The roadway which is horizontal and 100 m long is supported by vertical wires attached to the cable, the longest wire being 30 m and the shortest being 6 m. Find the length of a supporting wire attached to the roadway 18 m from the middle. ▶ Watch Free Video Solution on Doubtnut
65	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - MISCELLANEOUS EXERCISE - Q 4** An arch is in the form of a semi–ellipse. It is 8 m wide and 2 m high at the centre. Find the height of the arch at a point 1.5 m from one end. ▶ Watch Free Video Solution on Doubtnut

66	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - MISCELLANEOUS EXERCISE - Q 5** A rod of length 12 cm moves with its ends always touching the coordinate axes. Determine the equation of the locus of a point P on the rod, which is 3 cm from the end in contact with the x–axis. ▶ Watch Free Video Solution on Doubtnut
67	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - MISCELLANEOUS EXERCISE - Q 6** Find the area of the triangle formed by the lines joining the vertex of the parabola $x^2 = 12y$ to the ends of its latus rectum. ▶ Watch Free Video Solution on Doubtnut
68	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - MISCELLANEOUS EXERCISE - Q 7** A man running a racecourse notes that the sum of the distances from the two flag posts from him is always 10 m and the distance between the flag posts is 8 m. Find the equation of the posts traced by the man. ▶ Watch Free Video Solution on Doubtnut
69	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - MISCELLANEOUS EXERCISE - Q 8** An equilateral triangle is inscribed in the parabola $y^2 = 4ax$ where one vertex is at the vertex of the parabola. Find the length of the side of the triangle. ▶ Watch Free Video Solution on Doubtnut
70	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - MISCELLANEOUS EXERCISE - Q 11** Find the equations of the hyperbola satisfying the given conditions : Foci $(0, \pm 13)$, the conjugate axis is of length 24.

71	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 1** Find an equation of the circle with centre at (0,0) and radius r.
72	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 2** Find the equation of the circle with centre (–3, 2) and radius 4.
73	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 3** Find the centre and the radius of the circle $x^2 + y^2 + 8x + 10y$ $- 8 = 0$.
74	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 4** Find the equation of the circle which passes through the points $(2, \, -2)$, and (3,4) and whose centre lies on the line $x + y = 2$.
	NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 5

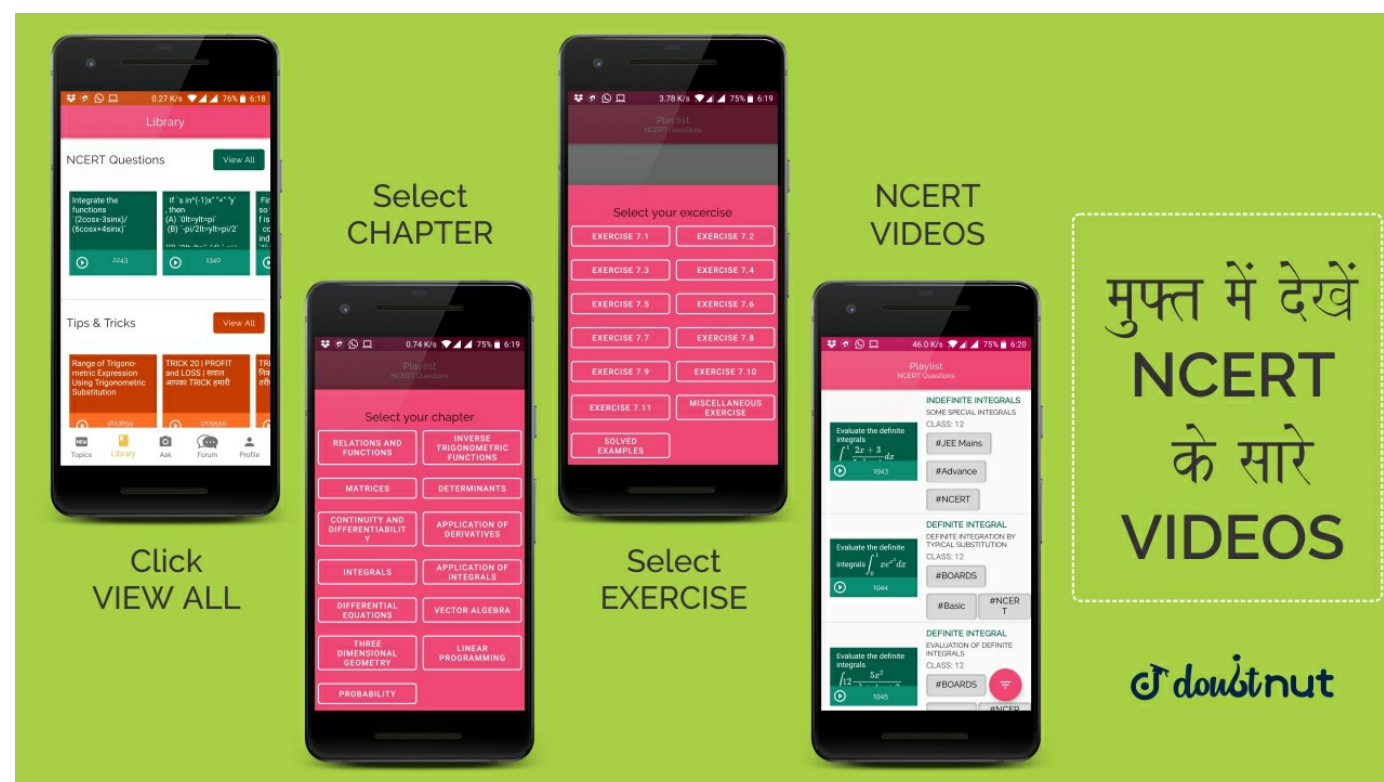| 75	Find the coordinates of the focus, axis, the equation of the directrix and latus rectum of the parabola $y^2 = 8x$.
	▶ Watch Free Video Solution on Doubtnut
76	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 6** Find the equation of the parabola with focus (2, 0) and directrix $x = -2$. ▶ Watch Free Video Solution on Doubtnut
77	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 7** Find the equation of the parabola with vertex at (0, 0) and focus at (0, 2). ▶ Watch Free Video Solution on Doubtnut
78	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 8** Find the equation of the parabola which is symmetric about the y-axis, and passes through the point $(2, -3)$. ▶ Watch Free Video Solution on Doubtnut
79	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 9** Find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the latus rectum of the ellipse $\dfrac{x^2}{25} + \dfrac{y^2}{9} = 1$ ▶ Watch Free Video Solution on Doubtnut
	NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q

80	**10** Find the coordinates of the foci, the vertices, the lengths of major and minor axes and the eccentricity of the ellipse $9x^2 + 4y^2 = 36$. ▶ Watch Free Video Solution on Doubtnut
81	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 11** Find the equation of the ellipse whose vertices are $(\pm 13, 0)$ and foci are $(\pm 5, 0)$. ▶ Watch Free Video Solution on Doubtnut
82	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 12** Find the equation of the ellipse, whose length of the major axis is 20 and foci are $(0, \pm 5)$. ▶ Watch Free Video Solution on Doubtnut
83	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 13** Find the equation of the ellipse, with major axis along the x-axis and passing through the points $(4, \quad 3)$ and $(- 1, \quad 4)$. ▶ Watch Free Video Solution on Doubtnut
♂ **doubtnut** पढ़ना हुआ आसान	
84	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 14** Find the coordinates of the foci and the vertices, the eccentricity, the length of the latus rectum of the hyperbolas: (i) $\dfrac{x^2}{9} - \dfrac{y^2}{16} = 1$ (ii) $y^2 - 16x^2 = 1$

85	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 15** Find the equation of the hyperbola with foci $(0, \pm 3)$ and vertices $\left(0, \pm \dfrac{\sqrt{11}}{2}\right)$
86	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 16** Find the equation of the hyperbola where foci are $(0, \pm 12)$ and the length of the latus rectum is 36.
87	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 17** The focus of a parabolic mirror as shown in is at a distance of 5 cm from its vertex. If the mirror is 45 cm deep, find the distance AB
88	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 18** A beam is supported at its ends by supports which are 12 metres apart. Since the load is concentrated at its centre, there is a deflection of 3 cm at the centre and the deflected beam is in the shape of a parabola. How far from the centre is the deflection 1 cm?
89	**NCERT - CLASS 11 - CHAPTER 11 CONIC SECTIONS - SOLVED EXAMPLES - Q 19** A rod AB of length 15 cm rests in between two coordinate axes in such a way that the end point A lies on x-axis and end point B lies on y-axis. A point P(x, y) is taken on the rod in such a way that AP = 6 cm. Show that the locus of P is an ellipse.
	|