

1. For the following parabolas, find focus, latus rectum equation of axis and equation of directrix:

(i) $y^2 = 18x$

(ii) $3y^2 = -16x$

(iii) $2x^2 = 5y$

(iv) $x^2 = -4y$

2. Find the equation of parabola having focus at $(2, 0)$, and directrix is $x + 2 = 0$.

3. Find the equation of parabolas having focus at $(3, -4)$ and directrix is $x + y - 2 = 0$.

4. Find the equation of the parabola whose vertex is $(2, 1)$ and directrix is $x - y + 1 = 0$.

5. Find the focus, vertex, equation of directrix and axis of the parabola $x = y^2 - 2y + 3$.

6. Find the equation of parabola with vertex at origin and passing through $(-3, 7)$ and axis along the x -axis.

7. Find the coordinates of a point on parabola $y^2 = 18x$, where ordinate is equal to three times the abscissa.

8. Find the equation of parabola with vertex $(2, 1)$ and focus $(1, -1)$.

6. Find the equation of the parabola whose

- (i) vertex is at $(0, 0)$ and focus on the positive of x -axis and length of latus rectum is $\frac{13}{6}$.
- (ii) vertex is at $(0, 0)$ and focus on the negative of y -axis and length of latus rectum is 17.