

Tell whether the parabola opens up, down, left or right.

1.  $x^2 = -8y$

2.  $y^2 = 16x$

3.  $y^2 = -24x$

4.  $x^2 = 12y$

5.  $-3y^2 = -18x$

6.  $-2x^2 = 22y$

Write the equation of each parabola in standard form.  
Identify the length of the Latus Rectum and p.

7.  $x^2 - 8x + 3y + 10 = 0$

8.  $y^2 - 2y = 3x + 5$

length LR: \_\_\_\_\_

p= \_\_\_\_\_

length of LR: \_\_\_\_\_

p= \_\_\_\_\_

9.  $y^2 + 6y - 2x + 9 = 0$

10.  $x^2 + 2x + 4y + 13 = 0$

length LR: \_\_\_\_\_

p= \_\_\_\_\_

length of LR: \_\_\_\_\_

p= \_\_\_\_\_

11.  $2y^2 - 20y + 54 = 4x$

12.  $x^2 + 8x + 20 = y$

length LR: \_\_\_\_\_

p= \_\_\_\_\_

length of LR: \_\_\_\_\_

p= \_\_\_\_\_

Write the standard form of the equation of the parabola with the given criteria

13. Vertex at  $(2, 2)$  and focus at  $(2, 5)$

14. Vertex at  $(3, 2)$  and focus at  $(1, 2)$

15. Vertex at  $(3, 2)$  and focus at  $(-1, 2)$

16. Vertex at  $(0, 4)$  and directrix  $y = 2$

17. Vertex at  $(-2, 1)$  and directrix  $x = 1$

18. Focus at  $(2, 2)$  and directrix  $x = -2$

19. Vertex at  $(0, 0)$  and focus at  $(0, -2)$

20. Vertex at  $(-4, 1)$  and directrix  $x = 1$

21. Focus at  $(2, 5)$  and directrix  $y = 3$