

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 $y = 3$