

More on Parabolas ... No Answers

Section 11.2

For Exercises 18–21, determine whether the axis of symmetry is vertical or horizontal and if the parabola opens upward, downward, left, or right.

18. $y = -2(x - 3)^2 + 2$

19. $x = 3(y - 9)^2 + 1$

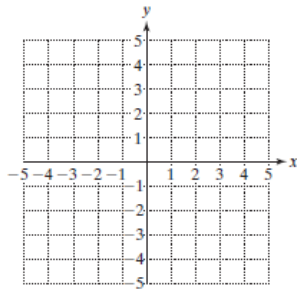
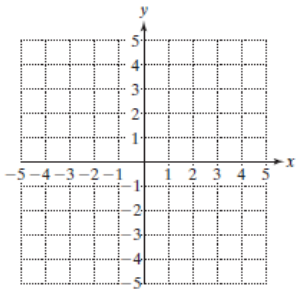
20. $x = -(y + 4)^2 - 8$

21. $y = (x + 3)^2 - 10$

For Exercises 22–25, determine the coordinates of the vertex and the equation of the axis of symmetry. Then use this information to graph the parabola.

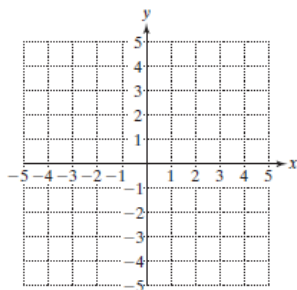
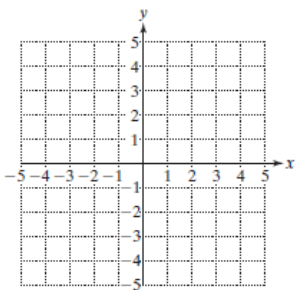
22. $x = -(y - 1)^2$

23. $y = (x + 2)^2$



24. $y = -\frac{1}{4}x^2$

25. $x = 2y^2 - 1$



For Exercises 26–29, write the equation in standard form $y = a(x - h)^2 + k$ or $x = a(y - k)^2 + h$. Then identify the vertex, and axis of symmetry.

26. $y = x^2 - 6x + 5$

27. $x = y^2 + 4y + 2$

28. $x = -4y^2 + 4y$

29. $y = -2x^2 - 2x$