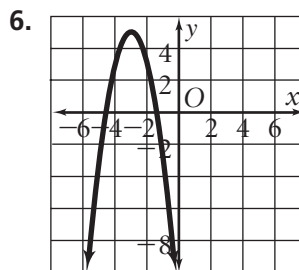
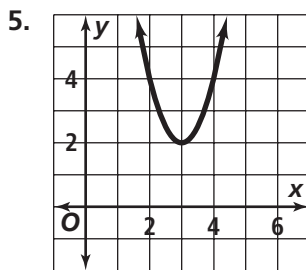
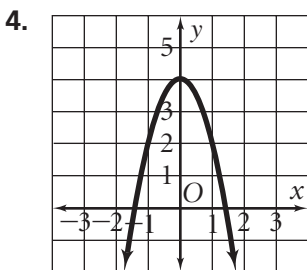
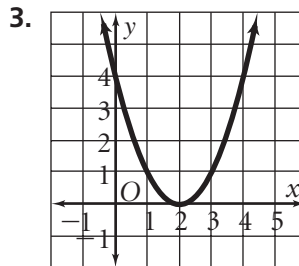
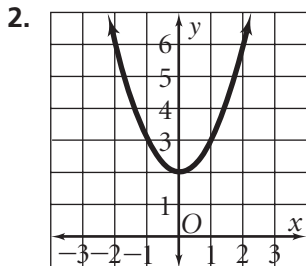
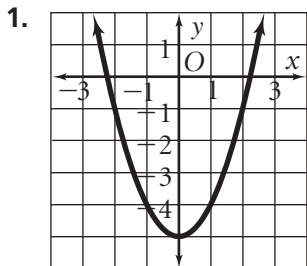


Practice 5-3

Transforming Parabolas

Write the equation of the parabola in vertex form.



Graph each function.

- | | | |
|------------------------------------|------------------------------------|-----------------------------------|
| 7. $y = (x - 2)^2 - 3$ | 8. $y = (x - 6)^2 + 6$ | 9. $y = \frac{1}{2}(x - 1)^2 - 1$ |
| 10. $y = 8(x + 1)^2 - 2$ | 11. $y = -3(x - 1)^2 + 3$ | 12. $y = 3(x + 2)^2 + 4$ |
| 13. $y = \frac{1}{8}(x + 1)^2 - 1$ | 14. $y = \frac{1}{2}(x + 6)^2 - 2$ | 15. $y = 2(x + 3)^2 - 3$ |
| 16. $y = 4(x - 2)^2$ | 17. $y = -2(x + 1)^2 - 5$ | 18. $y = 4(x - 1)^2 - 2$ |

Write each function in vertex form.

- | | | |
|-------------------------|--------------------------|------------------------|
| 19. $y = x^2 + 4x$ | 20. $y = 2x^2 + 8x + 3$ | 21. $y = -2x^2 - 8x$ |
| 22. $y = -x^2 + 4x + 4$ | 23. $y = x^2 - 4x - 4$ | 24. $y = x^2 + 5x$ |
| 25. $y = 2x^2 - 6$ | 26. $y = -3x^2 - x - 8$ | 27. $y = x^2 + 7x + 1$ |
| 28. $y = x^2 + 8x + 3$ | 29. $y = 2x^2 + 6x + 10$ | 30. $y = x^2 + 4x - 3$ |

Identify the vertex and the y-intercept of the graph of each function.

- | | | |
|------------------------------------|-------------------------------------|---------------------------|
| 31. $y = 3(x - 2)^2 - 4$ | 32. $y = -\frac{1}{3}(x + 6)^2 + 5$ | 33. $y = 2(x - 1)^2 - 1$ |
| 34. $y = \frac{2}{3}(x + 4)^2 - 3$ | 35. $y = (x - 1)^2 + 2$ | 36. $y = -3(x - 2)^2 + 4$ |
| 37. $y = 4(x - 5)^2 + 1$ | 38. $y = -2(x + 5)^2 - 3$ | 39. $y = -5(x + 2)^2 + 5$ |

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