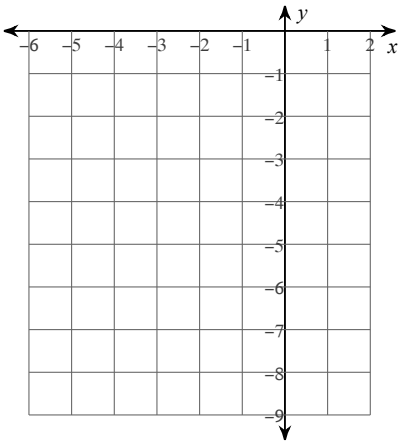
Pre-Calculus Name_____ ID: 1

Assignment

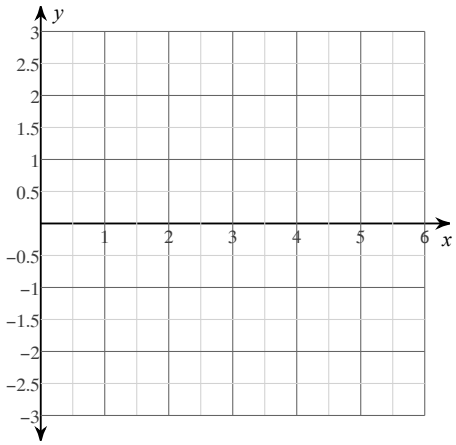
Date_____ Period____

Sketch the graph of each function.

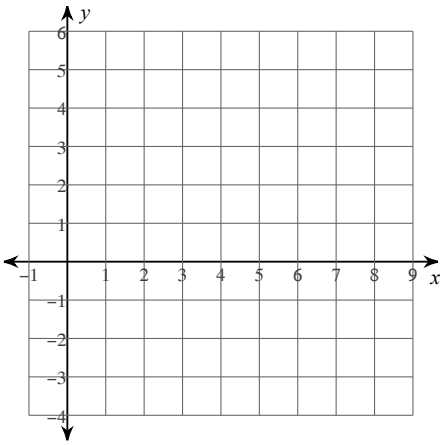
1) $y = -(x + 3)^2 - 4$



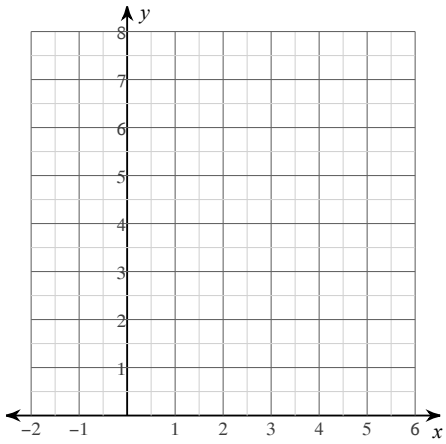
2) $y = -(x - 2)^2 + 2$



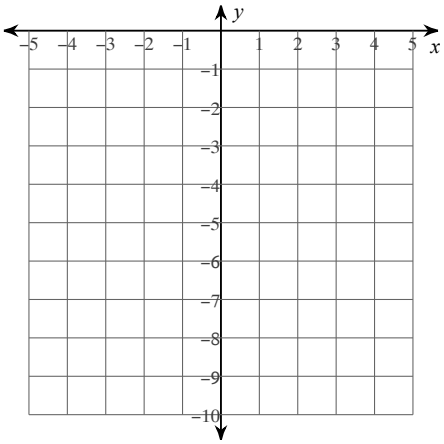
3) $y = 2(x - 1)^2 - 3$



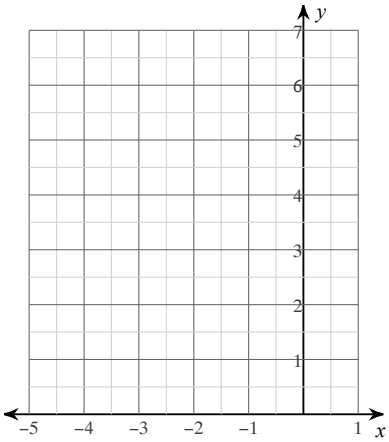
4) $y = (x - 2)^2 + 3$



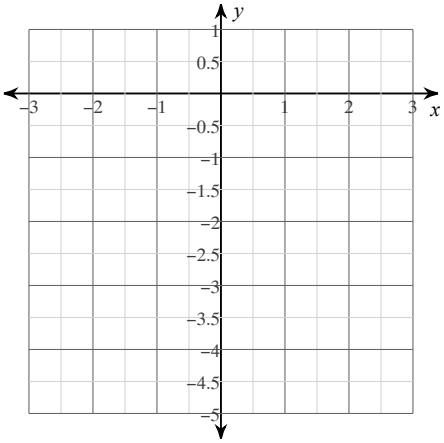
5) $y = -2(x+2)^2 - 1$



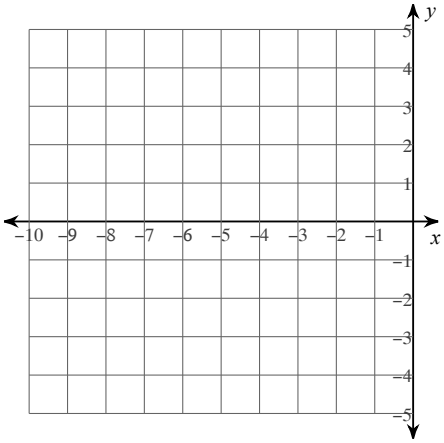
6) $y = (x+3)^2 + 2$



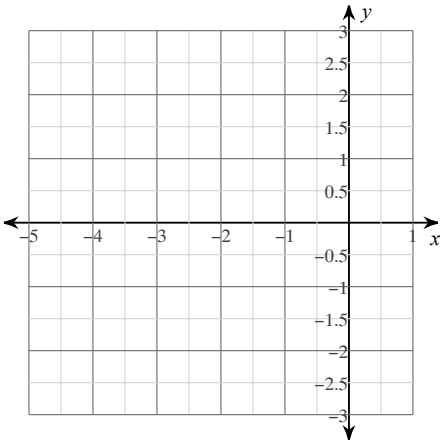
7) $y = (x+1)^2 - 4$



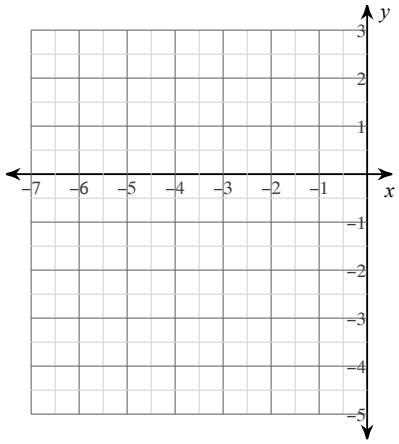
8) $y = -2(x+2)^2 + 4$



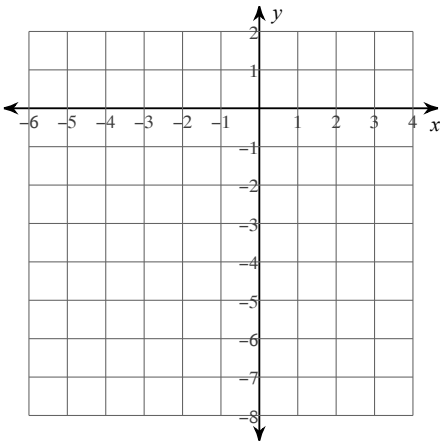
9) $y = (x + 3)^2 - 2$



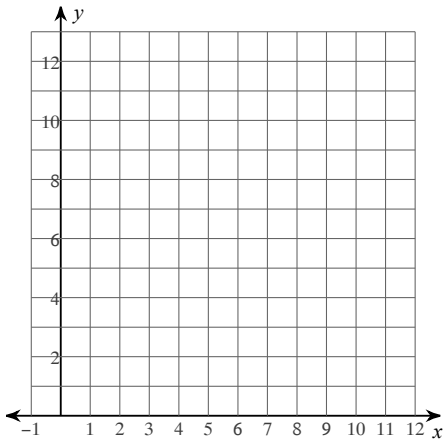
10) $y = -(x + 4)^2 + 1$



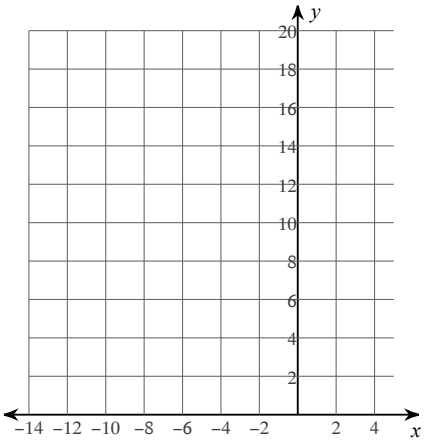
11) $y = -2(x + 2)^2 + 1$



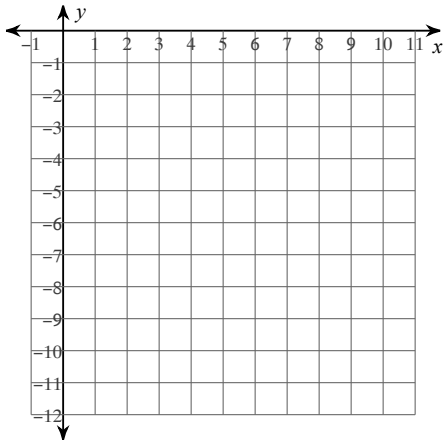
12) $y = 2(x - 4)^2 + 4$



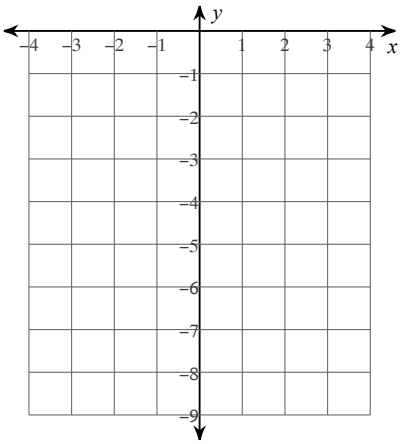
13) $y = 4(x + 4)^2 + 3$



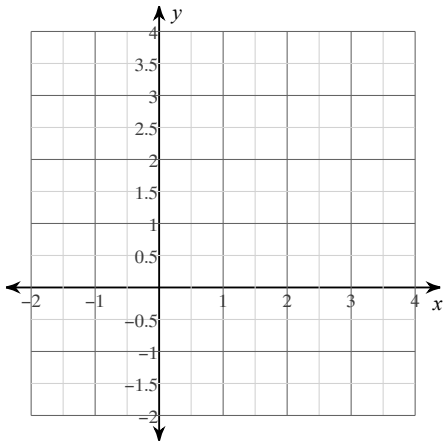
14) $y = -2(x - 3)^2 - 3$



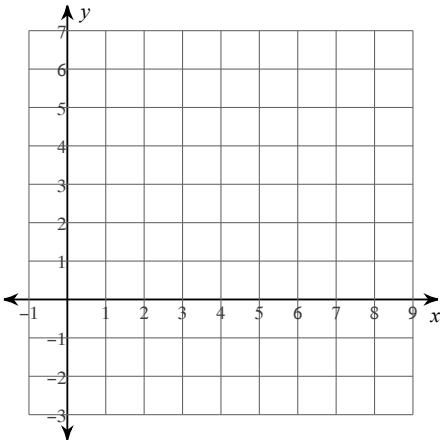
15) $y = -(x + 2)^2 - 4$



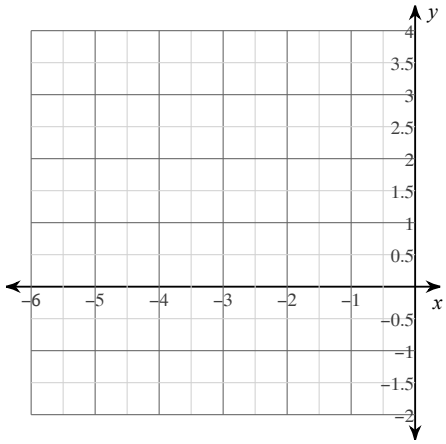
16) $y = -(x - 2)^2 + 3$



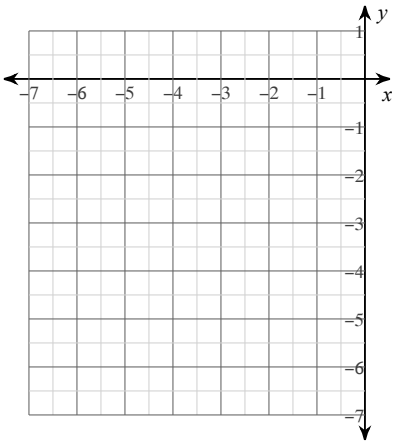
17) $y = 2(x - 2)^2 - 2$



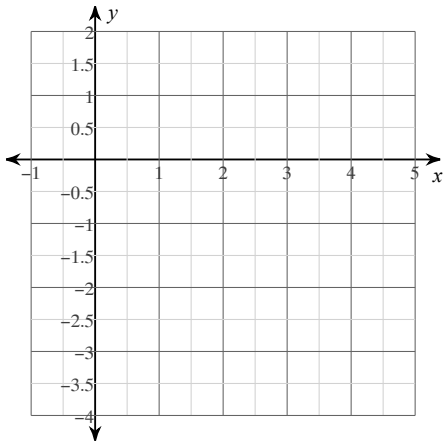
18) $y = -(x + 3)^2 + 3$



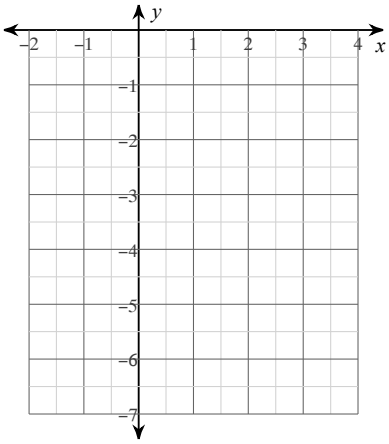
19) $y = -(x + 4)^2 - 1$



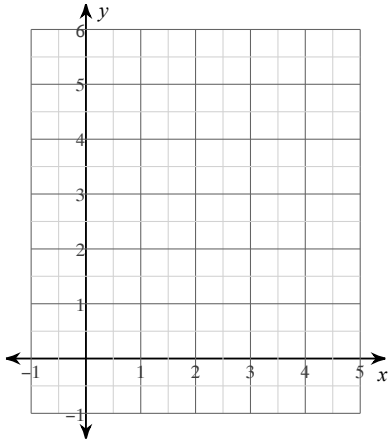
20) $y = (x - 3)^2 - 3$



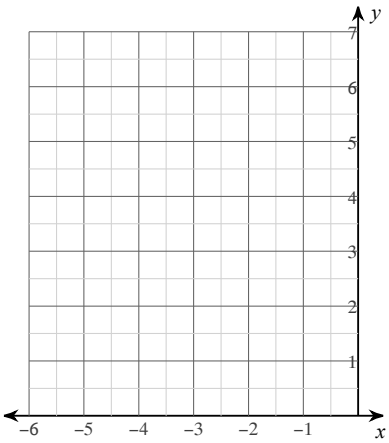
21) $y = -(x-1)^2 - 2$



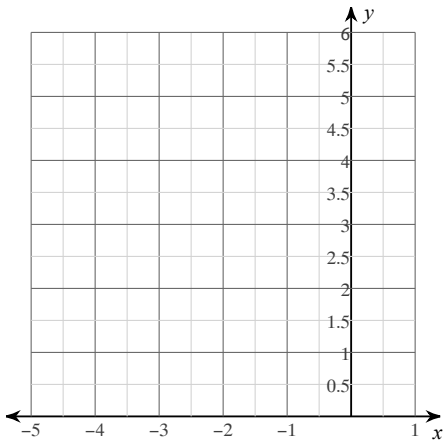
22) $y = \frac{1}{2}(x-2)^2 + 2$



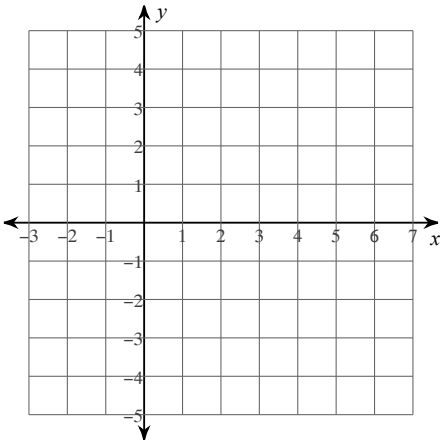
23) $y = (x+2)^2 + 2$



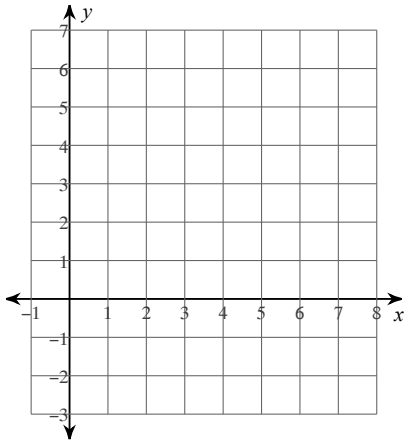
24) $y = (x+1)^2 + 1$



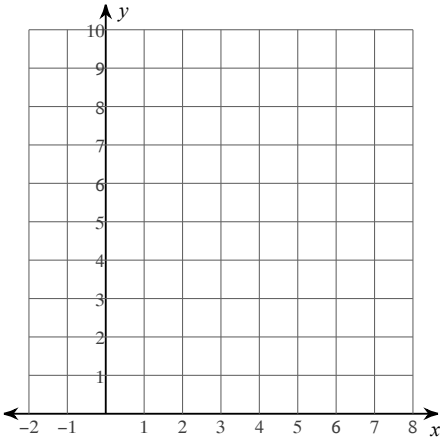
25) $y = -2(x-2)^2 + 4$



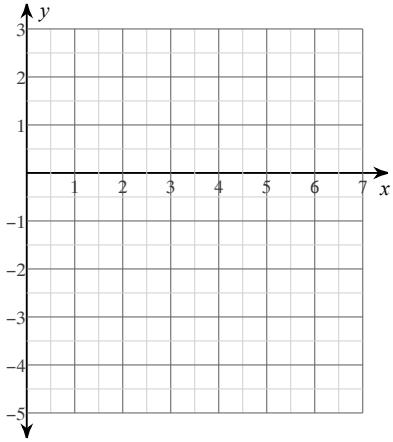
26) $y = 2(x-4)^2 - 2$



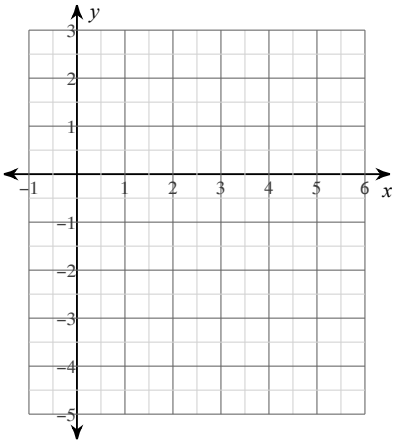
27) $y = 2(x-2)^2 + 1$



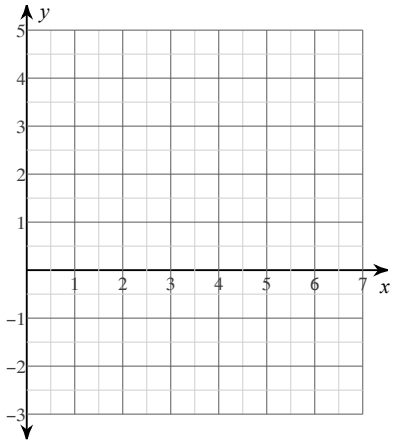
28) $y = -(x-4)^2 + 1$



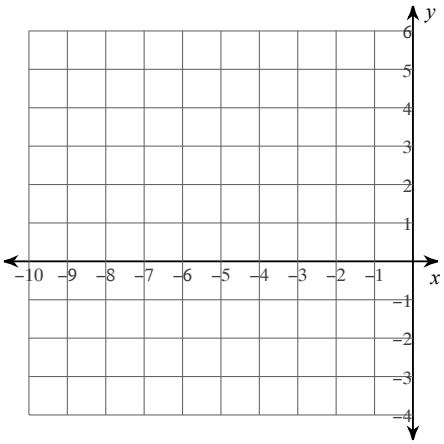
29) $y = (x - 4)^2 - 3$



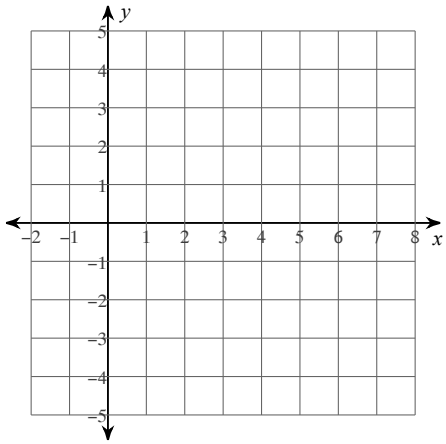
30) $y = (x - 4)^2 - 1$



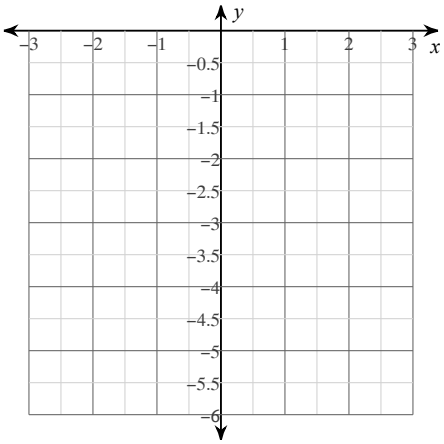
31) $y = 2(x + 3)^2 - 3$



32) $y = 2(x - 3)^2 - 4$



33) $y = -(x - 1)^2 - 1$



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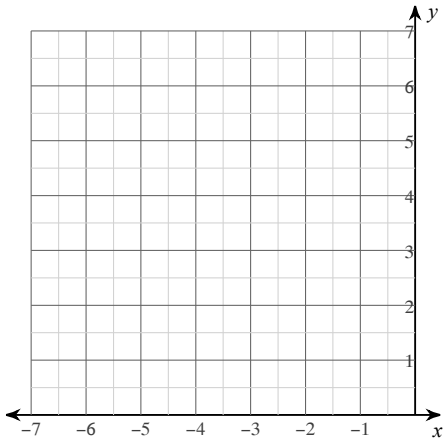
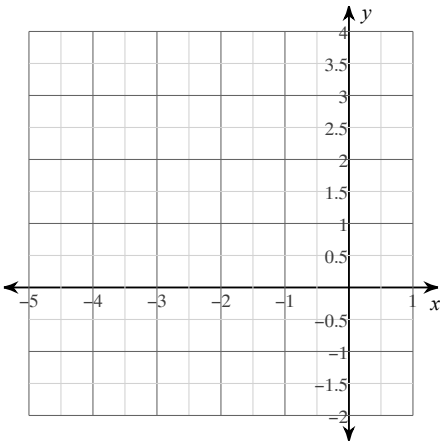
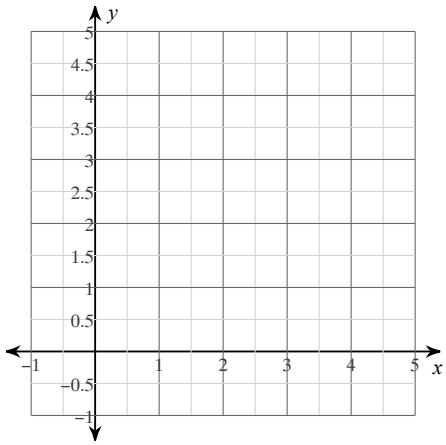


35) $y = (x + 2)^2 - 1$



36) $y = -(x - 2)^2 + 4$



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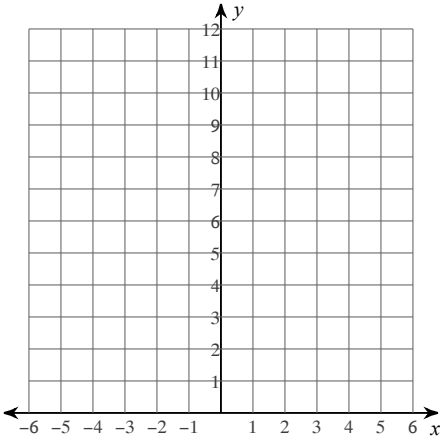

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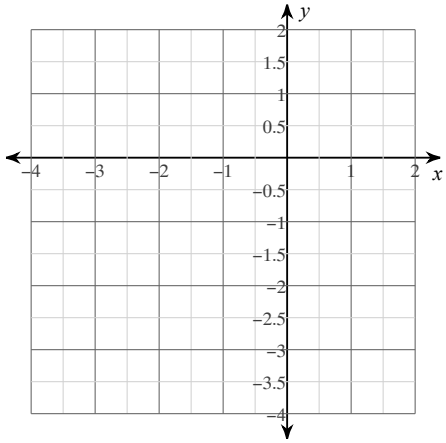
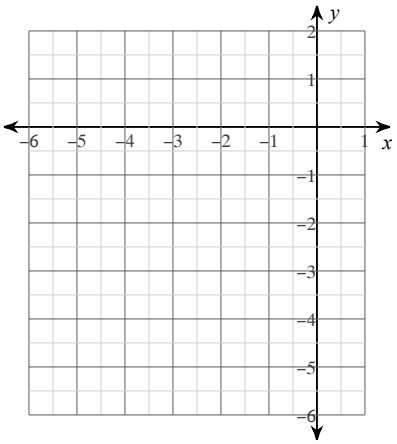
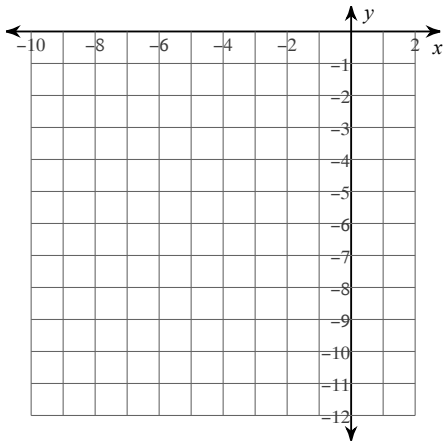


39) $y = (x + 4)^2 - 4$



40) $y = -2(x + 3)^2 - 3$



Use the information provided to write the vertex form equation of each parabola.

41) $y = x^2 + 6x + 11$

42) $y = -x^2 + 14x - 50$

43) $y = -x^2 + 10x - 16$

44) $y = \frac{1}{3}x^2 + 8$

45) $y = -3x^2 + 6x - 5$

46) $y = x^2 + 10x + 34$

47) $y = -2x^2 - 20x - 55$

48) $y = -\frac{1}{2}x^2 - 9x - \frac{71}{2}$

49) $y = 3x^2 - 36x + 101$

50) $y = 4x^2 - 80x + 393$

51) $y = -x^2 - 16x - 66$

52) $y = -\frac{1}{14}x^2 + \frac{10}{7}x - \frac{92}{7}$

53) $y = -2x^2 + 40x - 208$

54) $y = -\frac{1}{11}x^2 - \frac{10}{11}x - \frac{124}{11}$

55) $y = \frac{1}{3}x^2 - \frac{4}{3}x + \frac{28}{3}$

56) $y = x^2 - 2x + 8$

57) $y = 2x^2 + 8$

58) $y = \frac{1}{3}x^2 - 2$

59) $y = -3x^2 + 36x - 113$

60) $y = x^2 - 4x + 2$

61) $y = x^2 - 20x + 105$

62) $y = \frac{1}{2}x^2 - 9x + \frac{85}{2}$

63) $y = x^2 + 20x + 110$

64) $y = -2x^2 - 12x - 8$

65) $y = \frac{1}{4}x^2 - \frac{1}{2}x - \frac{19}{4}$

66) $y = -x^2 + 16x - 60$

67) $y = -x^2 + 18x - 77$

68) $y = 4x^2 - 72x + 334$

69) $y = -3x^2 - 36x - 103$

70) $y = x^2 - 8x + 11$

71) $y = -\frac{1}{4}x^2 + \frac{3}{2}x - \frac{21}{4}$

72) $y = x^2 - 4x + 14$

73) $y = -14x^2 - 280x - 1397$

74) $y = x^2 + 6x + 9$

75) $y = \frac{1}{4}x^2 - \frac{5}{2}x + \frac{49}{4}$

76) $y = \frac{1}{17}x^2 + \frac{8}{17}x - \frac{120}{17}$

77) $y = \frac{1}{2}x^2 - 2x + 10$

78) $y = -2x^2 - 28x - 98$

79) $y = \frac{1}{3}x^2 - \frac{16}{3}x + \frac{64}{3}$

80) $y = \frac{1}{4}x^2 + 3x + 6$

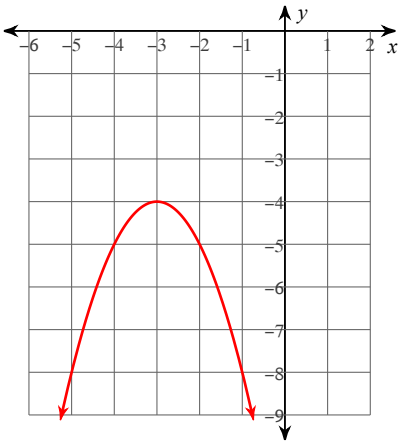
Pre-Calculus Name_____ ID: 1

Assignment

Date_____ Period____

Sketch the graph of each function.

1) $y = -(x + 3)^2 - 4$



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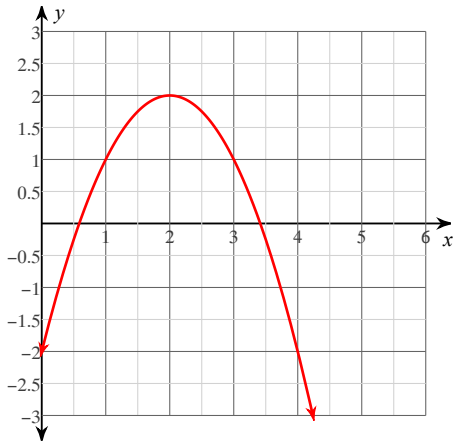
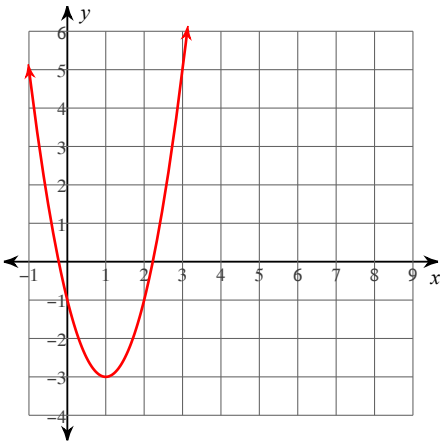
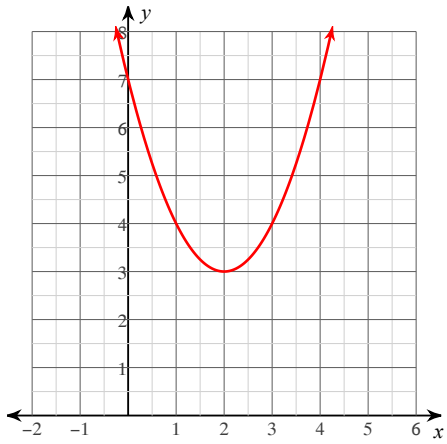


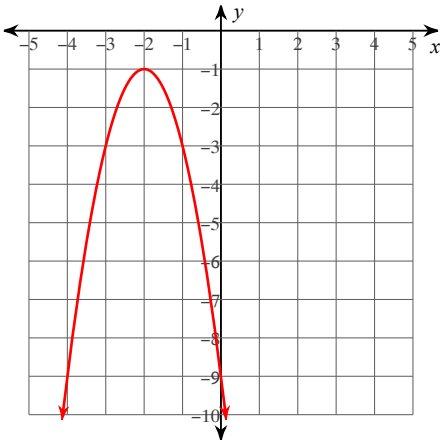
3) $y = 2(x - 1)^2 - 3$



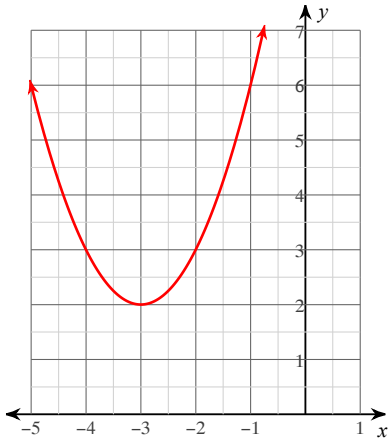
4) $y = (x - 2)^2 + 3$



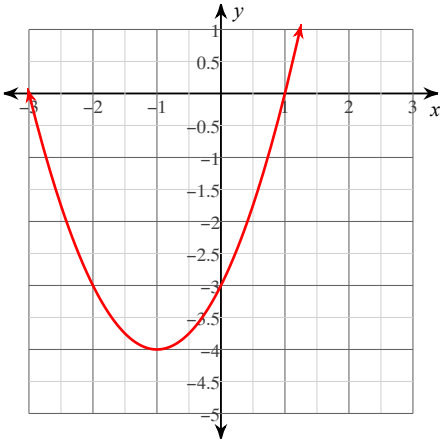
5) $y = -2(x+2)^2 - 1$



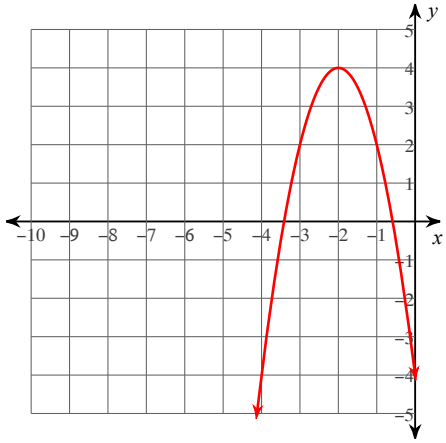
6) $y = (x+3)^2 + 2$



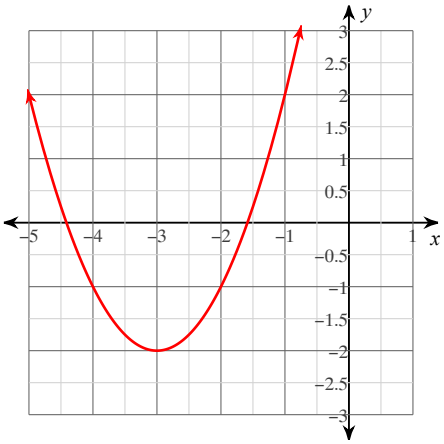
7) $y = (x+1)^2 - 4$



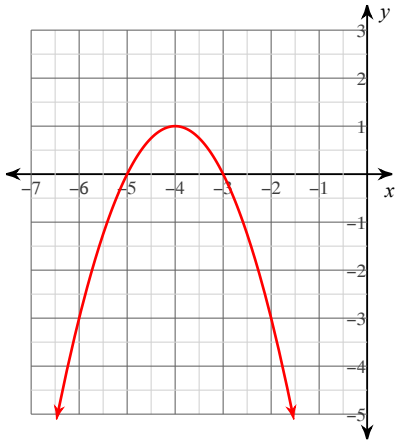
8) $y = -2(x+2)^2 + 4$



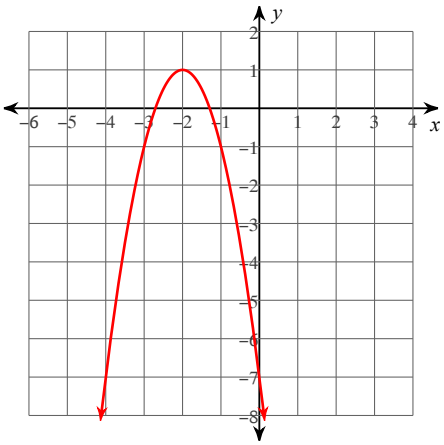
9) $y = (x + 3)^2 - 2$



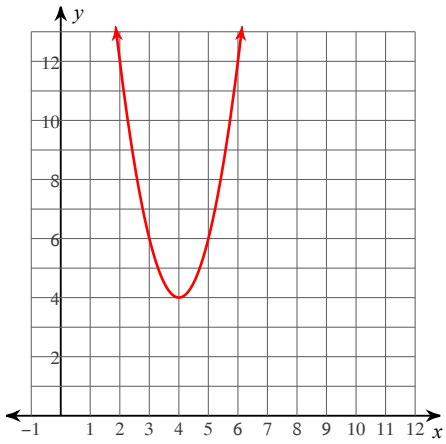
10) $y = -(x + 4)^2 + 1$



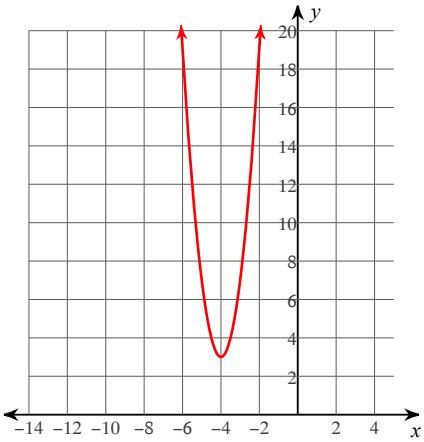
11) $y = -2(x + 2)^2 + 1$



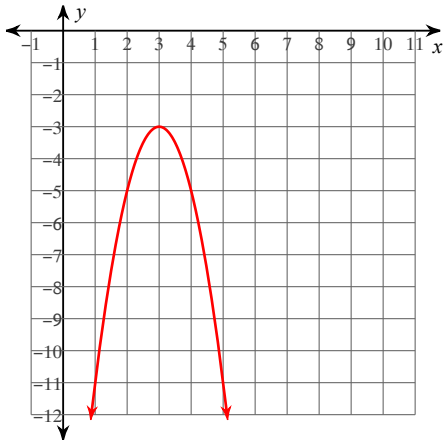
12) $y = 2(x - 4)^2 + 4$



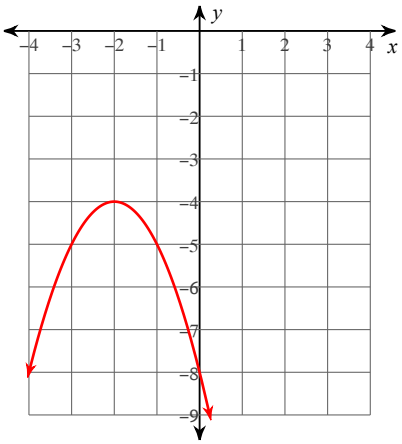
13) $y = 4(x + 4)^2 + 3$



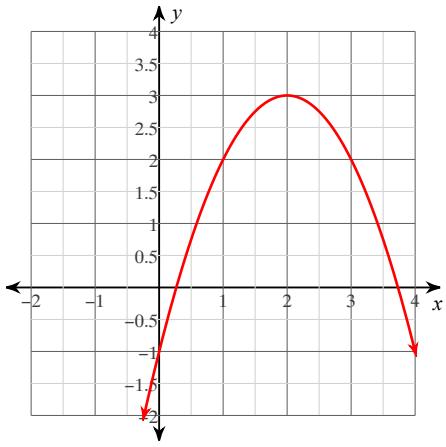
14) $y = -2(x - 3)^2 - 3$



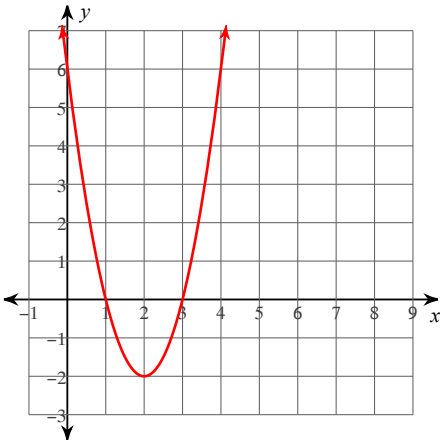
15) $y = -(x + 2)^2 - 4$



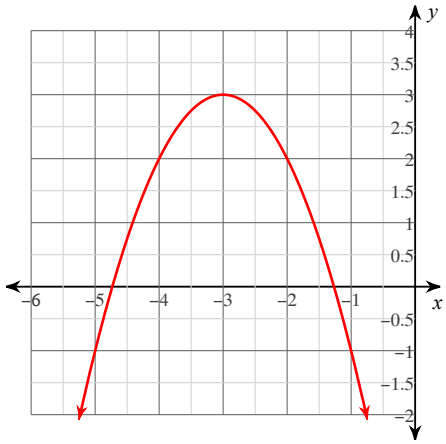
16) $y = -(x - 2)^2 + 3$



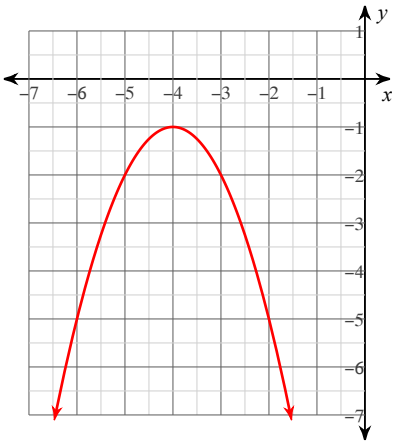
17) $y = 2(x - 2)^2 - 2$



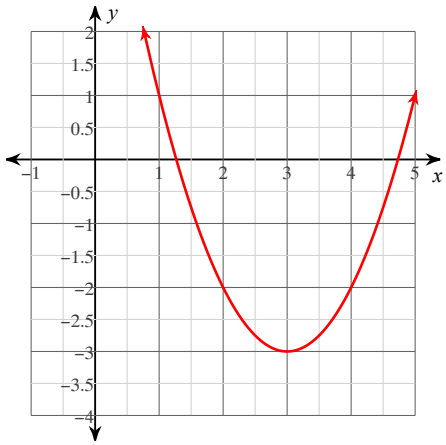
18) $y = -(x + 3)^2 + 3$



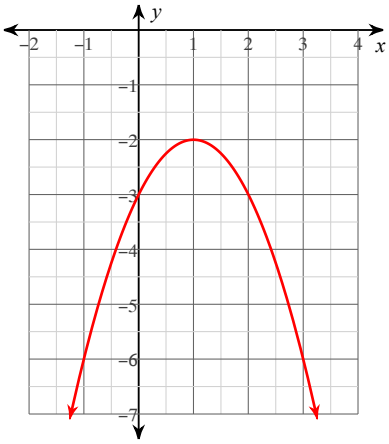
19) $y = -(x + 4)^2 - 1$



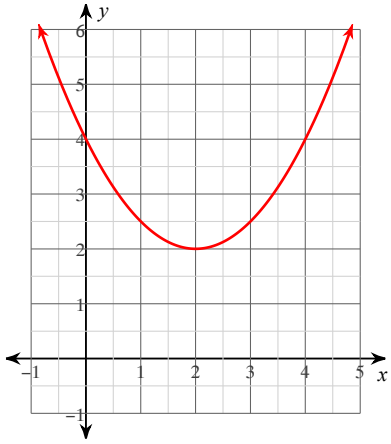
20) $y = (x - 3)^2 - 3$



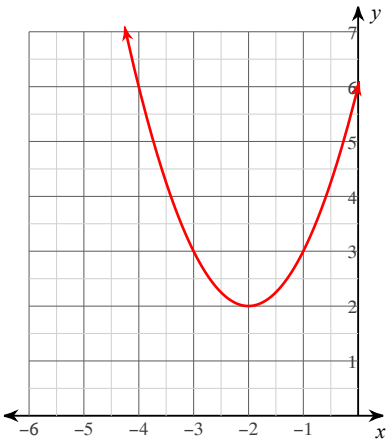
21) $y = -(x-1)^2 - 2$



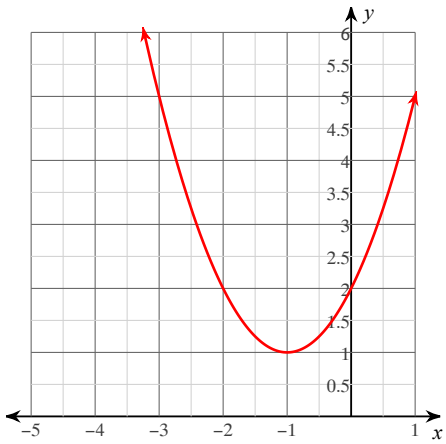
22) $y = \frac{1}{2}(x-2)^2 + 2$



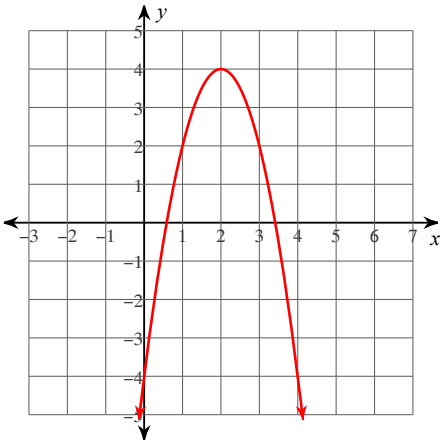
23) $y = (x+2)^2 + 2$



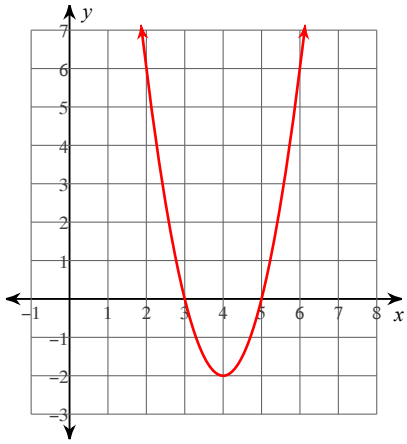
24) $y = (x+1)^2 + 1$



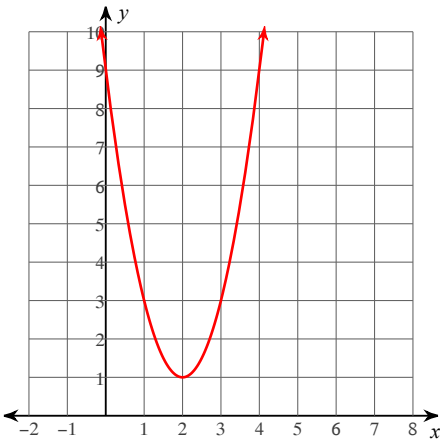
25) $y = -2(x-2)^2 + 4$



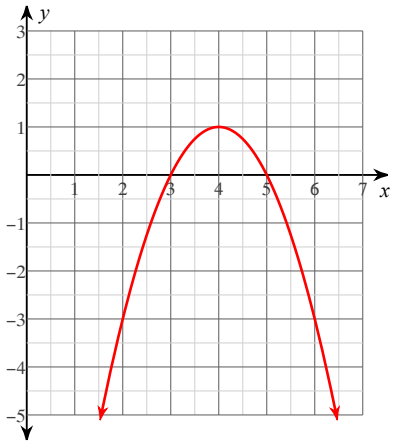
26) $y = 2(x-4)^2 - 2$



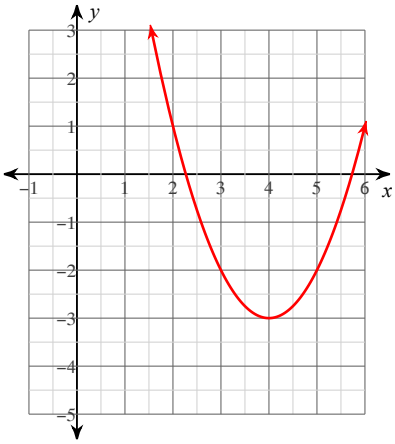
27) $y = 2(x-2)^2 + 1$



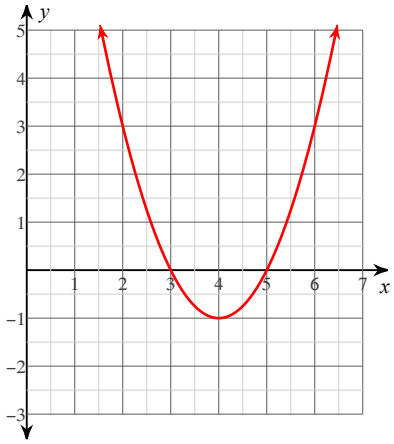
28) $y = -(x-4)^2 + 1$



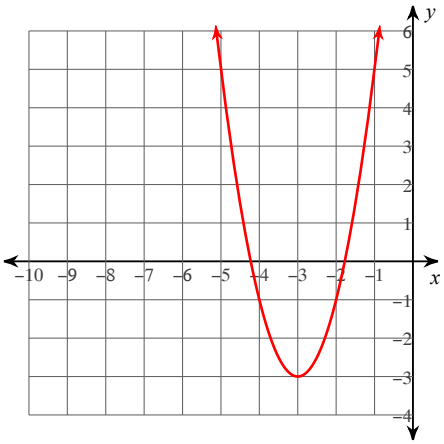
29) $y = (x - 4)^2 - 3$



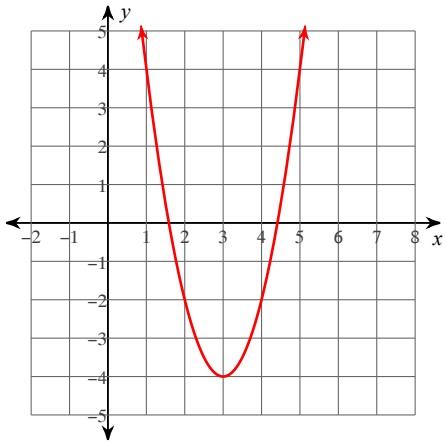
30) $y = (x - 4)^2 - 1$



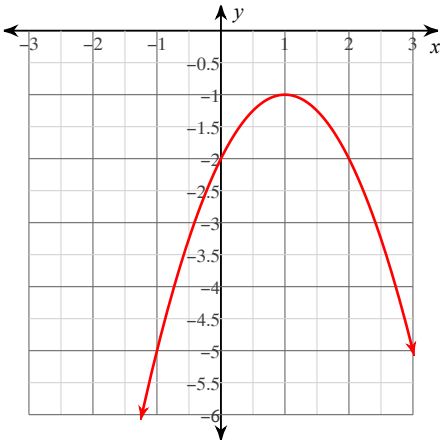
31) $y = 2(x + 3)^2 - 3$



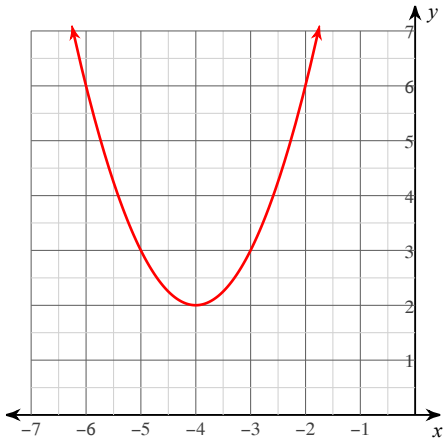
32) $y = 2(x - 3)^2 - 4$



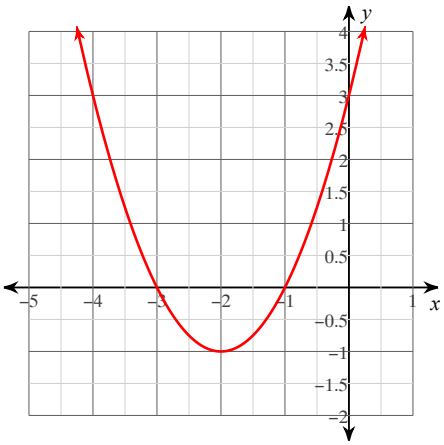
33) $y = -(x-1)^2 - 1$



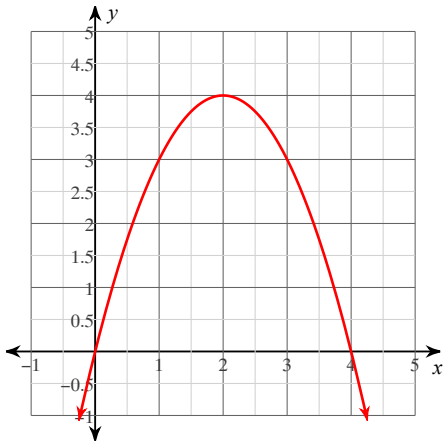
34) $y = (x+4)^2 + 2$



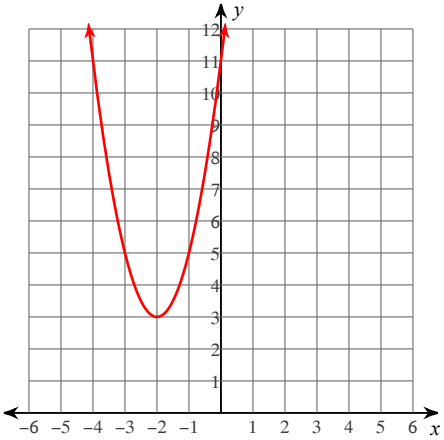
35) $y = (x+2)^2 - 1$



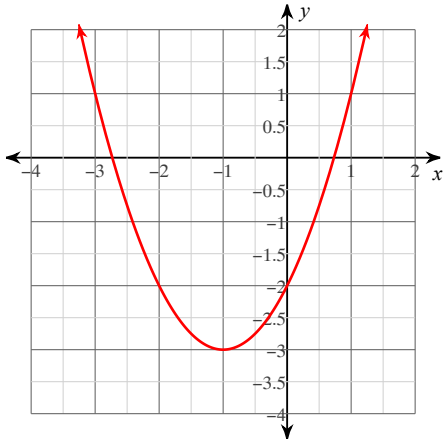
36) $y = -(x-2)^2 + 4$



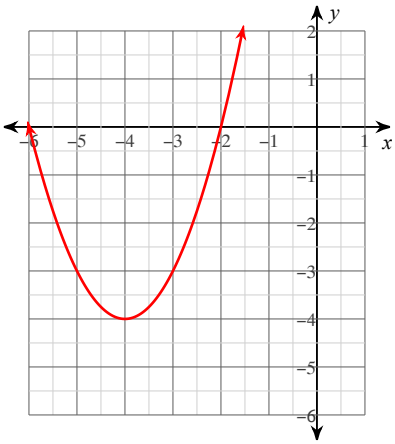
37) $y = 2(x + 2)^2 + 3$



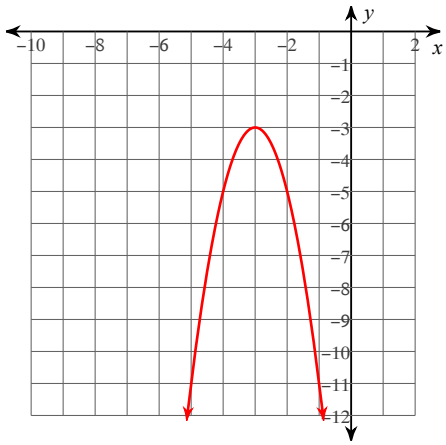
38) $y = (x + 1)^2 - 3$



39) $y = (x + 4)^2 - 4$



40) $y = -2(x + 3)^2 - 3$



Use the information provided to write the vertex form equation of each parabola.

41) $y = x^2 + 6x + 11$

$y = (x + 3)^2 + 2$

42) $y = -x^2 + 14x - 50$

$y = -(x - 7)^2 - 1$

43) $y = -x^2 + 10x - 16$

$y = -(x - 5)^2 + 9$

44) $y = \frac{1}{3}x^2 + 8$

$y = \frac{1}{3}x^2 + 8$

45) $y = -3x^2 + 6x - 5$

$y = -3(x - 1)^2 - 2$

46) $y = x^2 + 10x + 34$

$y = (x + 5)^2 + 9$

47) $y = -2x^2 - 20x - 55$

$y = -2(x + 5)^2 - 5$

48) $y = -\frac{1}{2}x^2 - 9x - \frac{71}{2}$

$y = -\frac{1}{2}(x + 9)^2 + 5$

49) $y = 3x^2 - 36x + 101$

$y = 3(x - 6)^2 - 7$

50) $y = 4x^2 - 80x + 393$

$y = 4(x - 10)^2 - 7$

51) $y = -x^2 - 16x - 66$

$y = -(x + 8)^2 - 2$

52) $y = -\frac{1}{14}x^2 + \frac{10}{7}x - \frac{92}{7}$

$y = -\frac{1}{14}(x - 10)^2 - 6$

53) $y = -2x^2 + 40x - 208$

$y = -2(x - 10)^2 - 8$

54) $y = -\frac{1}{11}x^2 - \frac{10}{11}x - \frac{124}{11}$

$y = -\frac{1}{11}(x + 5)^2 - 9$

55) $y = \frac{1}{3}x^2 - \frac{4}{3}x + \frac{28}{3}$

$y = \frac{1}{3}(x - 2)^2 + 8$

56) $y = x^2 - 2x + 8$

$y = (x - 1)^2 + 7$

57) $y = 2x^2 + 8$

$y = 2x^2 + 8$

58) $y = \frac{1}{3}x^2 - 2$

$y = \frac{1}{3}x^2 - 2$

59) $y = -3x^2 + 36x - 113$

$y = -3(x - 6)^2 - 5$

60) $y = x^2 - 4x + 2$

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

61) $y = x^2 - 20x + 105$

$y = (x - 10)^2 + 5$

62) $y = \frac{1}{2}x^2 - 9x + \frac{85}{2}$

$y = \frac{1}{2}(x - 9)^2 + 2$

63) $y = x^2 + 20x + 110$

$y = (x + 10)^2 + 10$

64) $y = -2x^2 - 12x - 8$

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

65) $y = \frac{1}{4}x^2 - \frac{1}{2}x - \frac{19}{4}$

$y = \frac{1}{4}(x - 1)^2 - 5$

66) $y = -x^2 + 16x - 60$

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

67) $y = -x^2 + 18x - 77$

$y = -(x - 9)^2 + 4$

68) $y = 4x^2 - 72x + 334$

$y = 4(x - 9)^2 + 10$

69) $y = -3x^2 - 36x - 103$

$y = -3(x + 6)^2 + 5$

70) $y = x^2 - 8x + 11$

$y = (x - 4)^2 - 5$

71) $y = -\frac{1}{4}x^2 + \frac{3}{2}x - \frac{21}{4}$

$y = -\frac{1}{4}(x - 3)^2 - 3$

72) $y = x^2 - 4x + 14$

$y = (x - 2)^2 + 10$

73) $y = -14x^2 - 280x - 1397$

$y = -14(x + 10)^2 + 3$

74) $y = x^2 + 6x + 9$

$y = (x + 3)^2$

75) $y = \frac{1}{4}x^2 - \frac{5}{2}x + \frac{49}{4}$

$y = \frac{1}{4}(x - 5)^2 + 6$

76) $y = \frac{1}{17}x^2 + \frac{8}{17}x - \frac{120}{17}$

$y = \frac{1}{17}(x + 4)^2 - 8$

77) $y = \frac{1}{2}x^2 - 2x + 10$

$y = \frac{1}{2}(x - 2)^2 + 8$

78) $y = -2x^2 - 28x - 98$

$y = -2(x + 7)^2$

79) $y = \frac{1}{3}x^2 - \frac{16}{3}x + \frac{64}{3}$

$y = \frac{1}{3}(x - 8)^2$

80) $y = \frac{1}{4}x^2 + 3x + 6$

$y = \frac{1}{4}(x + 6)^2 - 3$