Find the coordinates of vertex and y-intercept.

1. $y = x^2 + 3x + 2$

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

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

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

5. $y = x^2 - 4x + 3$

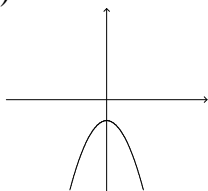Graph each parabola.

6. $y = x^2 - 2x - 3$
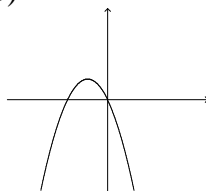
7. $y = 2x^2 - 7x - 4$

8. $y = 5x^2 - 11x - 12$

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

10. The quadratic g is given by $g(x) = ax^2 + bx + c$, where a and c are negative constants. Which of the following could be the graph of g ?
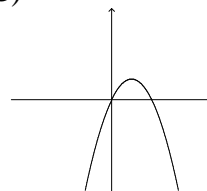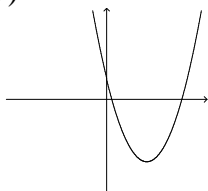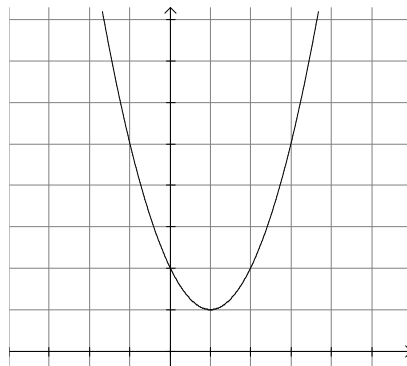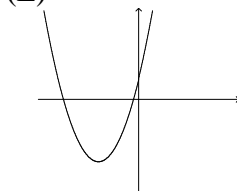
(A)

(B)

(C)

(D)

(E)

11. The figure above shows the graph of a quadratic function f that has a minimum at the point (1,1). If $f(b) = f(3)$, which of the following could be the value of b ?

(A) -3   (B) -2   (C) -1   (D) 1   (E) 5

1. vertex: $\left(-\dfrac{3}{2}, -\dfrac{1}{4}\right)$
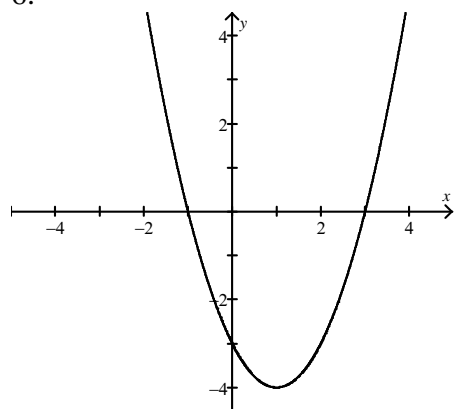
    y-intercept $= 2$

2. vertex: $\left(-\dfrac{5}{2}, -\dfrac{49}{4}\right)$

    y-intercept $= -6$

3. vertex: $(1, 0)$

    y-intercept $= 2$

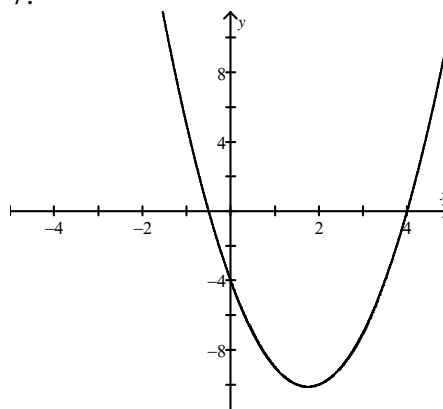4. vertex: $\left(\dfrac{4}{3}, -\dfrac{1}{3}\right)$
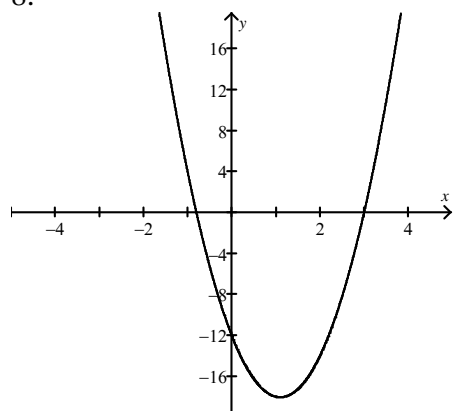
    y-intercept $= 5$
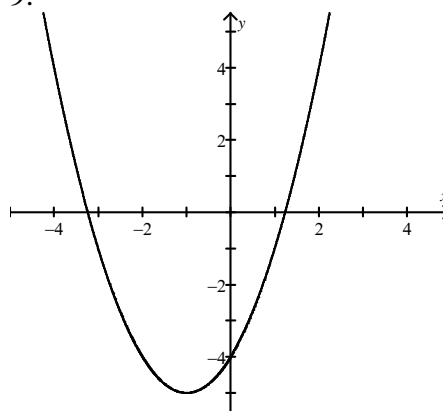
5. vertex: $(2, -1)$

    y-intercept $= 3$

6.

7.

8.

9.

10. (A)

11. (C)