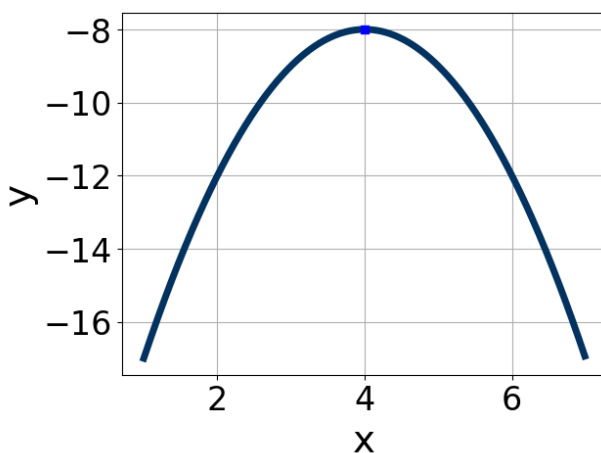


1. Solve the quadratic equation below. Then, choose the intervals that the solutions x_1 and x_2 belong to, with $x_1 \leq x_2$.

$$25x^2 + 25x - 36 = 0$$

- A. $x_1 \in [-3.3, -1.66]$ and $x_2 \in [0.6, 0.81]$
- B. $x_1 \in [-45.24, -44.98]$ and $x_2 \in [19.74, 20.21]$
- C. $x_1 \in [-0.97, 0.11]$ and $x_2 \in [1.98, 2.49]$
- D. $x_1 \in [-4.3, -3.52]$ and $x_2 \in [0.28, 0.59]$
- E. $x_1 \in [-9.8, -8.67]$ and $x_2 \in [0.15, 0.32]$

-
2. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a , b , and c belong to.



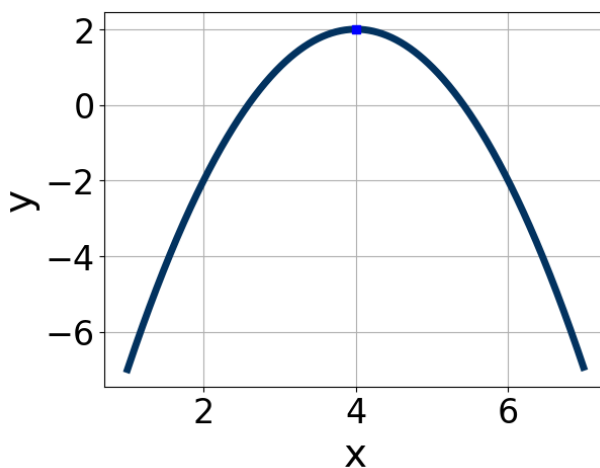
- A. $a \in [-1.2, -0.9]$, $b \in [-9, -4]$, and $c \in [-8, -7]$
- B. $a \in [-1.2, -0.9]$, $b \in [-9, -4]$, and $c \in [-24, -20]$
- C. $a \in [0.9, 1.2]$, $b \in [-9, -4]$, and $c \in [7, 11]$
- D. $a \in [0.9, 1.2]$, $b \in [8, 11]$, and $c \in [7, 11]$
- E. $a \in [-1.2, -0.9]$, $b \in [8, 11]$, and $c \in [-24, -20]$

3. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$12x^2 - 11x - 8 = 0$$

- A. $x_1 \in [-1.7, -1.3]$ and $x_2 \in [-0.18, 0.87]$
- B. $x_1 \in [-7, -2.9]$ and $x_2 \in [16.61, 16.75]$
- C. $x_1 \in [-23.3, -21.5]$ and $x_2 \in [22.61, 23.39]$
- D. $x_1 \in [-1.1, 0.8]$ and $x_2 \in [0.88, 2.02]$
- E. There are no Real solutions.

-
4. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b , and c belong to.



- A. $a \in [1, 2]$, $b \in [-10, -7]$, and $c \in [16, 21]$
- B. $a \in [-4, 0]$, $b \in [-10, -7]$, and $c \in [-14, -13]$
- C. $a \in [-4, 0]$, $b \in [-10, -7]$, and $c \in [-18, -15]$
- D. $a \in [1, 2]$, $b \in [7, 12]$, and $c \in [16, 21]$
- E. $a \in [-4, 0]$, $b \in [7, 12]$, and $c \in [-14, -13]$

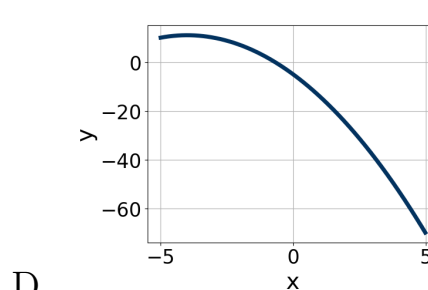
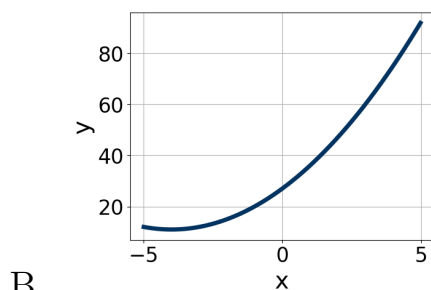
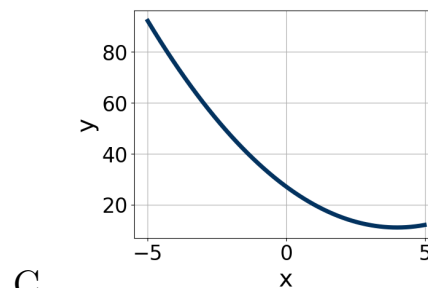
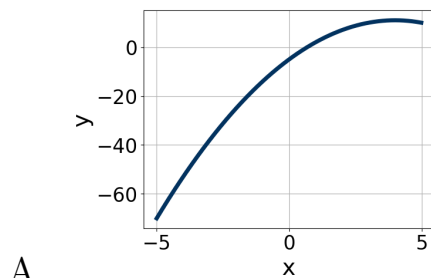
5. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$-12x^2 + 12x + 3 = 0$$

- A. $x_1 \in [-0.38, -0.08]$ and $x_2 \in [1.04, 1.46]$
 B. $x_1 \in [-14.52, -13.8]$ and $x_2 \in [1.84, 2.66]$
 C. $x_1 \in [-16.73, -16.31]$ and $x_2 \in [17.1, 17.97]$
 D. $x_1 \in [-1.88, -0.35]$ and $x_2 \in [-0.14, 0.68]$
 E. There are no Real solutions.

6. Graph the equation below.

$$f(x) = -(x + 4)^2 + 11$$



- E. None of the above.

7. Solve the quadratic equation below. Then, choose the intervals that the solutions x_1 and x_2 belong to, with $x_1 \leq x_2$.

$$25x^2 + 60x + 36 = 0$$

- A. $x_1 \in [-3.11, -1.27]$ and $x_2 \in [-0.61, -0.55]$
 - B. $x_1 \in [-1.72, -0.17]$ and $x_2 \in [-1.38, -1.16]$
 - C. $x_1 \in [-30.83, -29]$ and $x_2 \in [-30.11, -29.9]$
 - D. $x_1 \in [-4.74, -3.44]$ and $x_2 \in [-0.41, -0.26]$
 - E. $x_1 \in [-6.13, -4.91]$ and $x_2 \in [-0.28, -0.16]$
-

8. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax + b)(cx + d); b \leq d$.

$$24x^2 - 50x + 25$$

- A. $a \in [0.04, 1.67]$, $b \in [-30, -29]$, $c \in [0.52, 1.5]$, and $d \in [-20, -17]$
 - B. $a \in [2.27, 5.23]$, $b \in [-8, 0]$, $c \in [5.62, 6.91]$, and $d \in [-6, -2]$
 - C. $a \in [11.09, 13]$, $b \in [-8, 0]$, $c \in [1.22, 2.97]$, and $d \in [-6, -2]$
 - D. $a \in [1.97, 3.06]$, $b \in [-8, 0]$, $c \in [11.99, 13.01]$, and $d \in [-6, -2]$
 - E. None of the above.
-

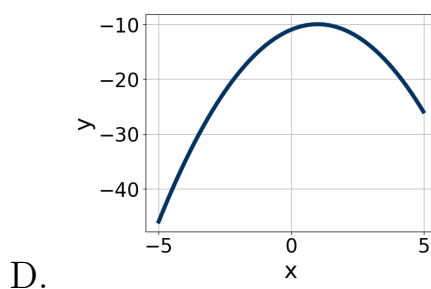
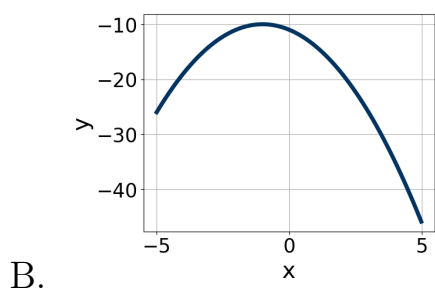
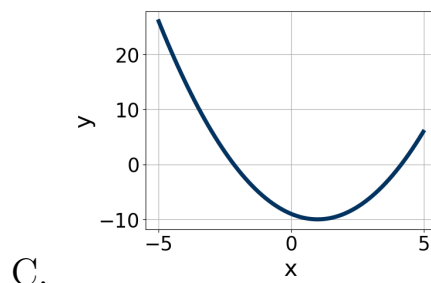
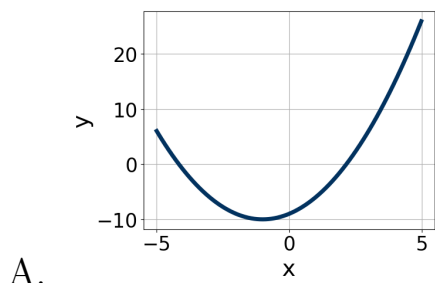
9. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax + b)(cx + d); b \leq d$.

$$36x^2 - 65x + 25$$

- A. $a \in [-0.36, 1.56]$, $b \in [-47, -43]$, $c \in [-2.5, 1.8]$, and $d \in [-20, -14]$
 - B. $a \in [3.97, 4.73]$, $b \in [-5, -3]$, $c \in [8.4, 10.1]$, and $d \in [-9, -2]$
 - C. $a \in [1.64, 2.78]$, $b \in [-5, -3]$, $c \in [16.7, 19.4]$, and $d \in [-9, -2]$
 - D. $a \in [11.45, 12.43]$, $b \in [-5, -3]$, $c \in [1.4, 5.9]$, and $d \in [-9, -2]$
 - E. None of the above.
-

10. Graph the equation below.

$$f(x) = (x - 1)^2 - 10$$



E. None of the above.
