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

$$25x^2 + 15x - 54 = 0$$

   A. $x_1 \in [-10.82, -8.61]$ and $x_2 \in [0.07, 0.38]$

   B. $x_1 \in [-45.2, -44.98]$ and $x_2 \in [29.91, 30.07]$

   C. $x_1 \in [-5.53, -4.34]$ and $x_2 \in [0.27, 0.51]$

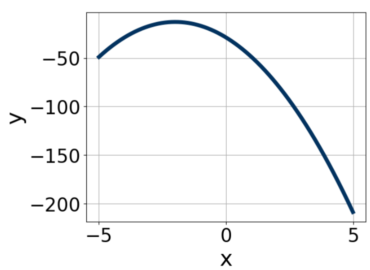
   D. $x_1 \in [-1.69, 0.54]$ and $x_2 \in [3.48, 3.61]$

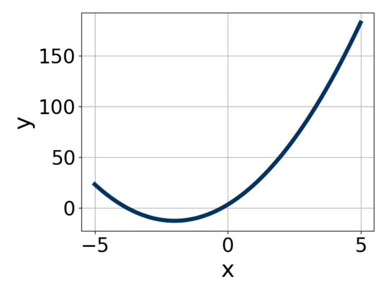
   E. $x_1 \in [-2.76, -1.2]$ and $x_2 \in [1.11, 1.25]$

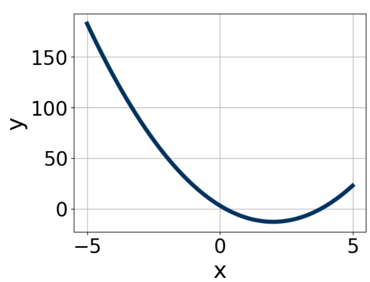
---

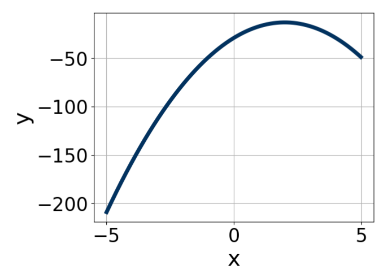
2. Graph the equation below.

$$f(x) = (x-2)^2 - 13$$

A. 

C. 

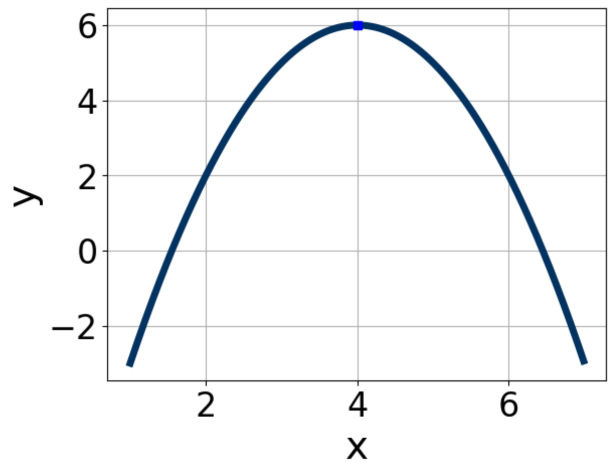
B. 

D. 

   E. None of the above.

---

3. 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. $a \in [0.9, 2.9], \quad b \in [-9, -7], \text{ and } \quad c \in [20, 23]$

B. $a \in [-1.6, -0.3], \quad b \in [-9, -7], \text{ and } \quad c \in [-12, -8]$

C. $a \in [0.9, 2.9], \quad b \in [5, 9], \text{ and } \quad c \in [20, 23]$

D. $a \in [-1.6, -0.3], \quad b \in [5, 9], \text{ and } \quad c \in [-12, -8]$

E. $a \in [-1.6, -0.3], \quad b \in [-9, -7], \text{ and } \quad c \in [-24, -19]$

---

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

$$13x^2 - 12x - 8 = 0$$

A. $x_1 \in [-0.8, 0.31]$ and $x_2 \in [0.59, 1.62]$

B. $x_1 \in [-6.37, -5.35]$ and $x_2 \in [17.36, 18.54]$

C. $x_1 \in [-23.36, -22.6]$ and $x_2 \in [23.86, 24.67]$

D. $x_1 \in [-1.94, -1.22]$ and $x_2 \in [-0.59, 1.08]$

E. There are no Real solutions.

---

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

$$24x^2 + 2x - 15$$

A. $a \in [6.4, 10.9], \quad b \in [-4, -1], \quad c \in [2.5, 4.6], \text{ and } \quad d \in [0, 8]$

B. $a \in [3.7, 5.6], \quad b \in [-4, -1], \quad c \in [4.1, 6.3], \text{ and } \quad d \in [0, 8]$

C. $a \in [0.5, 1.1], \quad b \in [-4, -1], \quad c \in [14.4, 19.4], \text{ and } \quad d \in [0, 8]$

D. $a \in [0.5, 1.1], \quad b \in [-20, -16], \quad c \in [-4, 1.1], \text{ and } \quad d \in [16, 26]$

E. None of the above.
