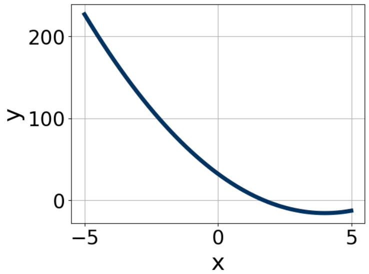
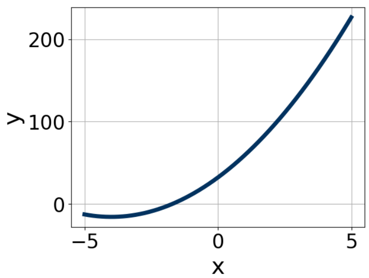
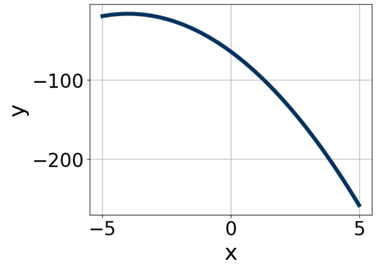
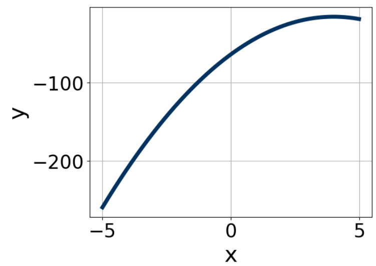
1. Graph the equation below.

$$f(x) = (x-4)^2 - 16$$

A. 

B. 

C. 

D. 

E. None of the above.

---

2. 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. $a \in [11.05, 12.72], \quad b \in [2, 14], \quad c \in [1.98, 2.67], \text{ and } \quad d \in [3, 6]$

B. $a \in [2.45, 3.13], \quad b \in [2, 14], \quad c \in [7.5, 8.29], \text{ and } \quad d \in [3, 6]$

C. $a \in [0.43, 1.83], \quad b \in [19, 28], \quad c \in [0.26, 1.26], \text{ and } \quad d \in [30, 32]$

D. $a \in [4.46, 7.71], \quad b \in [2, 14], \quad c \in [3.96, 4.37], \text{ and } \quad d \in [3, 6]$

E. None of the above.

---

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

$$-13x^2 - 7x + 7 = 0$$

A. $x_1 \in [-21.31, -20.06]$ and $x_2 \in [19.89, 20.13]$

B. $x_1 \in [-1.26, -0.99]$ and $x_2 \in [-0.2, 0.73]$

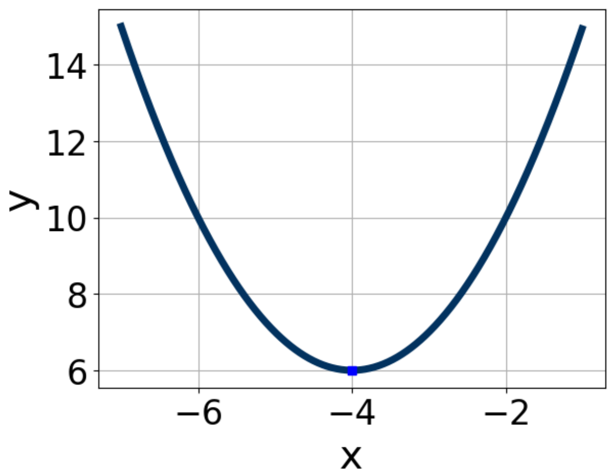
C. $x_1 \in [-6.81, -6.12]$ and $x_2 \in [13.07, 13.86]$

D. $x_1 \in [-0.66, -0.16]$ and $x_2 \in [0.58, 1.16]$

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. $a \in [1, 5], \quad b \in [-10, -3], \text{ and } \quad c \in [7, 13]$

B. $a \in [-2, 0], \quad b \in [-10, -3], \text{ and } \quad c \in [-10, -8]$

C. $a \in [1, 5], \quad b \in [6, 9], \text{ and } \quad c \in [19, 24]$

D. $a \in [-2, 0], \quad b \in [6, 9], \text{ and } \quad c \in [-10, -8]$

E. $a \in [1, 5], \quad b \in [-10, -3], \text{ and } \quad c \in [19, 24]$

---

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

$$-10x^2 - 13x + 5 = 0$$

A. $x_1 \in [-4.4, -2.8]$ and $x_2 \in [15.4, 16.9]$

B. $x_1 \in [-20.3, -19.3]$ and $x_2 \in [18.4, 19.6]$

C. $x_1 \in [-1.2, -0.1]$ and $x_2 \in [1.4, 2.9]$

D. $x_1 \in [-2.1, -0.6]$ and $x_2 \in [0, 1]$

E. There are no Real solutions.

---

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

$$25x^2 - 10x - 24 = 0$$

A. $x_1 \in [-0.52, -0.22]$ and $x_2 \in [1.92, 2.66]$

B. $x_1 \in [-1.68, -1.57]$ and $x_2 \in [0.27, 0.67]$

C. $x_1 \in [-20.14, -19.49]$ and $x_2 \in [29.9, 30.1]$

D. $x_1 \in [-1.1, -0.68]$ and $x_2 \in [0.61, 1.79]$

E. $x_1 \in [-4.51, -3.63]$ and $x_2 \in [0.05, 0.37]$

---

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

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

A. $x_1 \in [-30.04, -29.15]$ and $x_2 \in [44.8, 45.08]$

B. $x_1 \in [-4.93, -3.14]$ and $x_2 \in [0.55, 0.7]$

C. $x_1 \in [-6.3, -4.62]$ and $x_2 \in [0.15, 0.51]$

D. $x_1 \in [-1.15, 0.07]$ and $x_2 \in [3.46, 3.65]$

E. $x_1 \in [-1.91, -1.14]$ and $x_2 \in [1.53, 2.08]$

---

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

$$54x^2 + 69x + 20$$

A. $a \in [26.3, 28.3], \quad b \in [-1, 10], \quad c \in [1.95, 2.38], \text{ and } \quad d \in [5, 8]$

B. $a \in [2.7, 5], \quad b \in [-1, 10], \quad c \in [11.99, 12.1], \text{ and } \quad d \in [5, 8]$

C. $a \in [0, 2.2], \quad b \in [24, 26], \quad c \in [0.91, 1.89], \text{ and } \quad d \in [44, 50]$

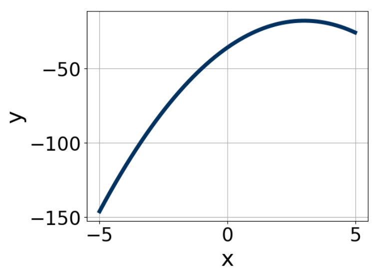
D. $a \in [8.6, 10.1], \quad b \in [-1, 10], \quad c \in [5.85, 6.2], \text{ and } \quad d \in [5, 8]$

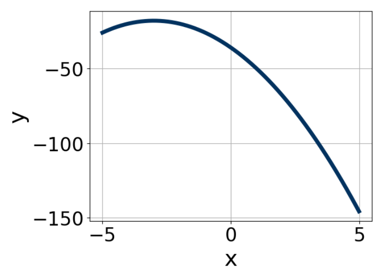
E. None of the above.

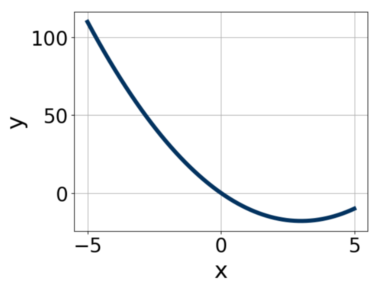
---

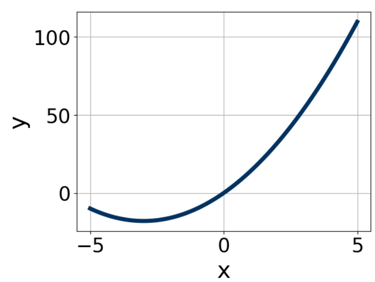
9. Graph the equation below.

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

A. 

C. 

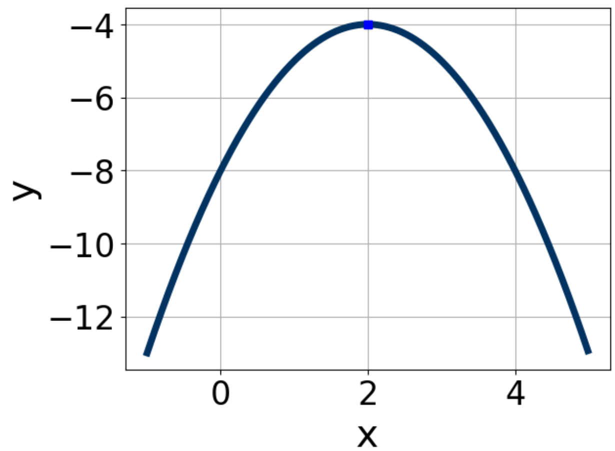
B. 

D. 

E. None of the above.

---

10. 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. $a \in [-2.9, -0.5], \quad b \in [3, 8], \text{ and } \quad c \in [-11, -3]$

B. $a \in [0.9, 2], \quad b \in [-5, -1], \text{ and } \quad c \in [-2, 2]$

C. $a \in [0.9, 2], \quad b \in [3, 8], \text{ and } \quad c \in [-2, 2]$

D. $a \in [-2.9, -0.5], \quad b \in [-5, -1], \text{ and } \quad c \in [-11, -3]$

E. $a \in [-2.9, -0.5], \quad b \in [-5, -1], \text{ and } \quad c \in [-2, 2]$