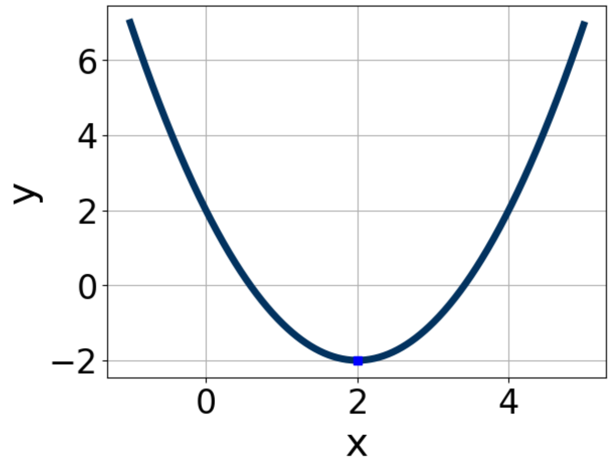
1. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b,$ and c belong to.



A. $a \in [-0.8, 1.6], \quad b \in [-7, -3], \text{ and } \quad c \in [-2, 3]$

B. $a \in [-1.3, -0.1], \quad b \in [2, 5], \text{ and } \quad c \in [-11, -2]$

C. $a \in [-1.3, -0.1], \quad b \in [-7, -3], \text{ and } \quad c \in [-11, -2]$

D. $a \in [-0.8, 1.6], \quad b \in [2, 5], \text{ and } \quad c \in [4, 7]$

E. $a \in [-0.8, 1.6], \quad b \in [2, 5], \text{ and } \quad c \in [-2, 3]$

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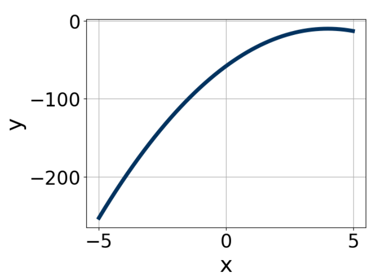
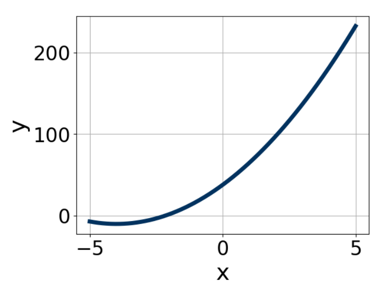
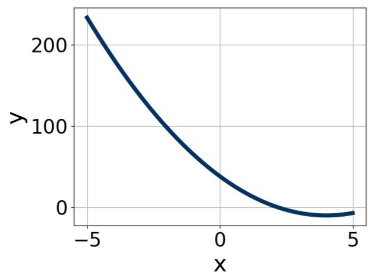
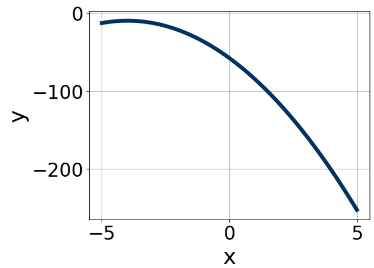
2. Graph the equation below.

$$f(x) = -(x + 4)^2 - 10$$

A. 

B. 

C. 

D. 

E. None of the above.

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

$$12x^2 + 11x - 36 = 0$$

A. $x_1 \in [-2.85, -1.51]$ and $x_2 \in [1.28, 1.37]$

B. $x_1 \in [-2.02, -0.43]$ and $x_2 \in [2.62, 2.68]$

C. $x_1 \in [-10.07, -8.79]$ and $x_2 \in [0.21, 0.36]$

D. $x_1 \in [-28, -26.57]$ and $x_2 \in [15.88, 16.06]$

E. $x_1 \in [-6.78, -6.53]$ and $x_2 \in [0.42, 0.51]$

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

$$-13x^2 + 13x + 9 = 0$$

A. $x_1 \in [-19.44, -19.06]$ and $x_2 \in [4.8, 7]$

B. $x_1 \in [-25.36, -24.71]$ and $x_2 \in [25.5, 26.7]$

C. $x_1 \in [-0.67, 0.1]$ and $x_2 \in [0.5, 2.2]$

D. $x_1 \in [-2.38, -0.66]$ and $x_2 \in [-0.9, 1.2]$

E. There are no Real solutions.

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

$$54x^2 + 57x + 10$$

A. $a \in [0.96, 1.5], \quad b \in [10, 15], \quad c \in [0.64, 1.22], \text{ and } \quad d \in [39, 46]$

B. $a \in [2.31, 3.02], \quad b \in [-4, 11], \quad c \in [17.72, 18.65], \text{ and } \quad d \in [3, 8]$

C. $a \in [26.31, 27.42], \quad b \in [-4, 11], \quad c \in [1.98, 2.28], \text{ and } \quad d \in [3, 8]$

D. $a \in [7.9, 9.15], \quad b \in [-4, 11], \quad c \in [4.53, 6.57], \text{ and } \quad d \in [3, 8]$

E. None of the above.