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

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

A. $x_1 \in [-2.73, -2.18]$ and $x_2 \in [-0.7, -0.55]$

B. $x_1 \in [-2.18, 0.16]$ and $x_2 \in [-1.43, -1.16]$

C. $x_1 \in [-30.98, -28.84]$ and $x_2 \in [-30.05, -29.99]$

D. $x_1 \in [-4.74, -2.66]$ and $x_2 \in [-0.43, -0.35]$

E. $x_1 \in [-6.08, -4.26]$ and $x_2 \in [-0.26, -0.09]$

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2. 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. $x_1 \in [-4.46, -2.53]$ and $x_2 \in [-0.44, -0.3]$

B. $x_1 \in [-6.25, -5.12]$ and $x_2 \in [-0.29, -0.06]$

C. $x_1 \in [-30.46, -29.13]$ and $x_2 \in [-30.19, -29.83]$

D. $x_1 \in [-2.02, -1.16]$ and $x_2 \in [-1.22, -1.09]$

E. $x_1 \in [-3.48, -1.75]$ and $x_2 \in [-0.8, -0.45]$

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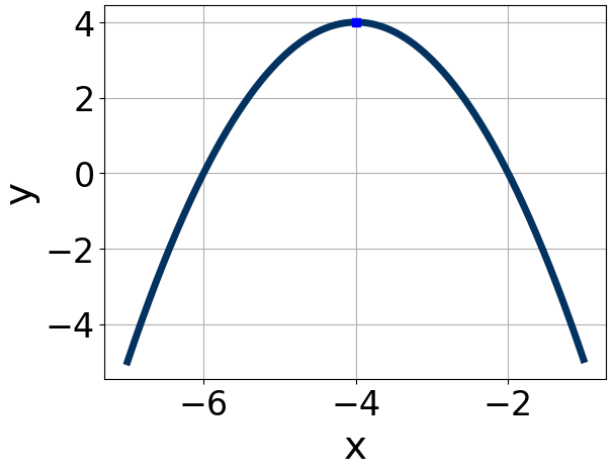
3. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



A. $a \in [-2, 0]$, $b \in [6, 10]$, and $c \in [-24, -19]$

B. $a \in [0, 3]$, $b \in [6, 10]$, and $c \in [19, 23]$

C. $a \in [-2, 0]$, $b \in [6, 10]$, and $c \in [-12, -9]$

D. $a \in [0, 3]$, $b \in [-9, -5]$, and $c \in [19, 23]$

E. $a \in [-2, 0]$, $b \in [-9, -5]$, and $c \in [-12, -9]$

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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).

$$-20x^2 + 8x + 4 = 0$$

A. $x_1 \in [-14.07, -13.78]$ and $x_2 \in [4.1, 6.2]$

B. $x_1 \in [-0.63, 0.1]$ and $x_2 \in [0.5, 2.2]$

C. $x_1 \in [-0.72, -0.52]$ and $x_2 \in [-0.6, 0.5]$

D. $x_1 \in [-19.75, -19.19]$ and $x_2 \in [18.1, 20.2]$

E. There are no Real solutions.

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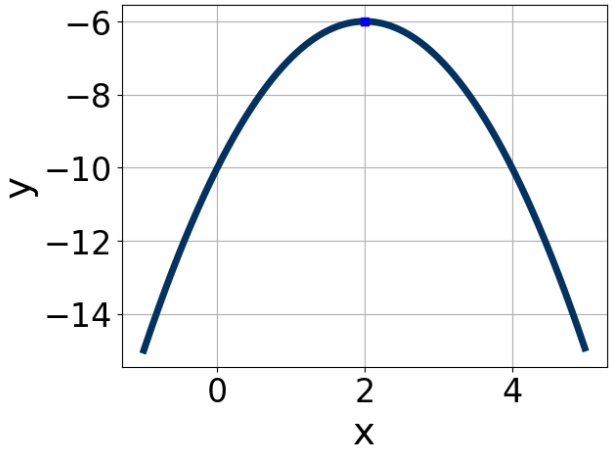
5. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



A. $a \in [-2, 0]$, $b \in [-6, -1]$, and $c \in [-10, -8]$

B. $a \in [-2, 0]$, $b \in [3, 5]$, and $c \in [-10, -8]$

C. $a \in [1, 2]$, $b \in [3, 5]$, and $c \in [-2, 0]$

D. $a \in [-2, 0]$, $b \in [-6, -1]$, and $c \in [0, 4]$

E. $a \in [1, 2]$, $b \in [-6, -1]$, and $c \in [-2, 0]$

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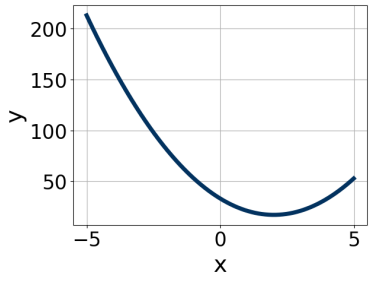
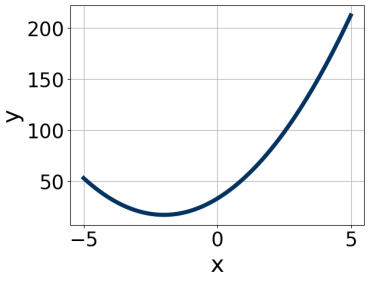
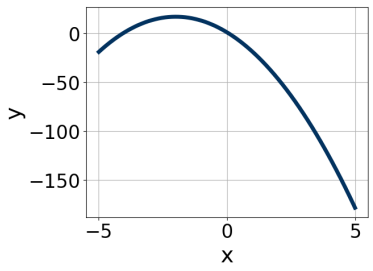
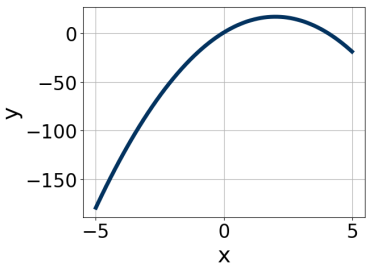
6. Graph the equation below.

$$f(x) = -(x-2)^2 + 17$$

A.


C.


B.


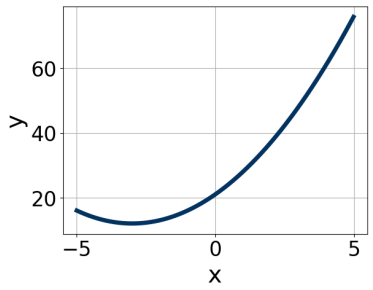
D.


E. None of the above.

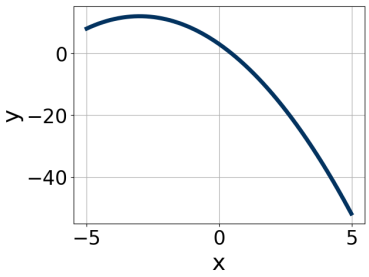
7. Graph the equation below.

$$f(x) = (x-3)^2 + 12$$

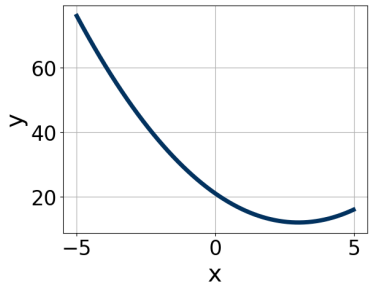
A.



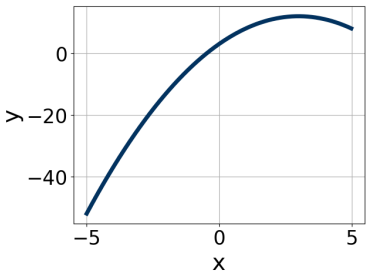
C.



B.



D.



E. None of the above.

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

$$36x^2 + 37x - 10$$

A. $a \in [26.2, 27.6]$, $b \in [-4, 1]$, $c \in [0.5, 2.4]$, and $d \in [2, 9]$

B. $a \in [-1.9, 3.9]$, $b \in [-8, -6]$, $c \in [0.5, 2.4]$, and $d \in [44, 47]$

C. $a \in [3.7, 4.6]$, $b \in [-4, 1]$, $c \in [4.8, 10.4]$, and $d \in [2, 9]$

D. $a \in [8.1, 10.9]$, $b \in [-4, 1]$, $c \in [1.1, 4.2]$, and $d \in [2, 9]$

E. None of the above.

9. 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. $x_1 \in [-1.05, 0.13]$ and $x_2 \in [0.9, 2.3]$

B. $x_1 \in [-1.54, -1.01]$ and $x_2 \in [-1.4, 1.2]$

C. $x_1 \in [-6.53, -4.98]$ and $x_2 \in [16.7, 18.2]$

D. $x_1 \in [-22.63, -21.73]$ and $x_2 \in [22.3, 24.9]$

E. There are no Real solutions.

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

$$36x^2 - 60x + 25$$

A. $a \in [1.69, 2.02]$, $b \in [-6, -3]$, $c \in [15, 25]$, and $d \in [-11, 1]$

B. $a \in [0.33, 1.33]$, $b \in [-33, -26]$, $c \in [0, 2]$, and $d \in [-34, -26]$

C. $a \in [11.57, 12.34]$, $b \in [-6, -3]$, $c \in [2, 4]$, and $d \in [-11, 1]$

D. $a \in [5.49, 6.23]$, $b \in [-6, -3]$, $c \in [6, 11]$, and $d \in [-11, 1]$

E. None of the above.
