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

$$16x^2 + 9x - 2 = 0$$

A. $x_1 \in [-12.14, -11.48]$ and $x_2 \in [1.89, 2.9]$

B. $x_1 \in [-15.12, -14.66]$ and $x_2 \in [13.8, 14.86]$

C. $x_1 \in [-0.45, -0.04]$ and $x_2 \in [0.66, 1.27]$

D. $x_1 \in [-1.27, -0.24]$ and $x_2 \in [0.01, 0.49]$

E. There are no Real solutions.

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

$$14x^2 - 15x - 2 = 0$$

A. $x_1 \in [-18.39, -17.58]$ and $x_2 \in [18.87, 19.46]$

B. $x_1 \in [-1.48, -1.08]$ and $x_2 \in [-0.9, 0.56]$

C. $x_1 \in [-0.7, 0.98]$ and $x_2 \in [0.54, 1.44]$

D. $x_1 \in [-2.36, -1.65]$ and $x_2 \in [16.54, 17.21]$

E. There are no Real solutions.

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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 $x_1 \leq x_2$.

$$25x^2 - 50x + 24 = 0$$

A. $x_1 \in [0.43, 0.63]$ and $x_2 \in [1.59, 1.76]$

B. $x_1 \in [0.23, 0.31]$ and $x_2 \in [3.93, 4.11]$

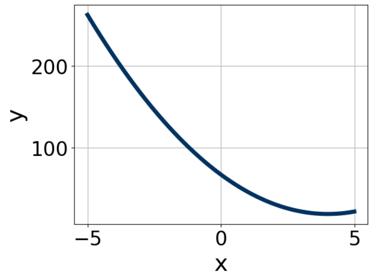
C. $x_1 \in [0.77, 0.84]$ and $x_2 \in [0.86, 1.45]$

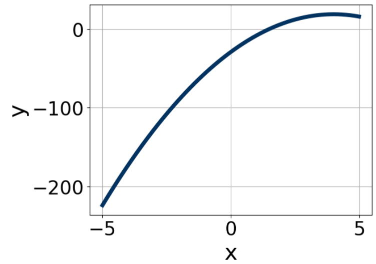
D. $x_1 \in [0.31, 0.49]$ and $x_2 \in [2.16, 2.56]$

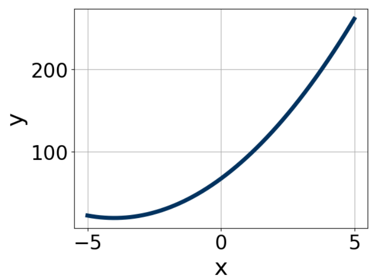
E. $x_1 \in [19.91, 20.29]$ and $x_2 \in [29.96, 30.41]$

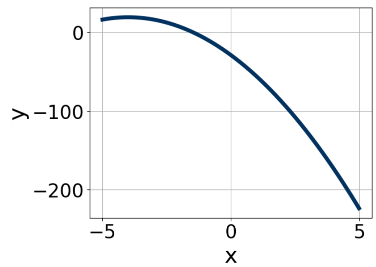
4. Graph the equation below.

$$f(x) = (x + 4)^2 + 19$$

A. 

C. 

B. 

D. 

E. None of the above.

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

$$54x^2 - 33x - 10$$

A. $a \in [2, 5], \quad b \in [-5, 0], \quad c \in [17.94, 18.63], \text{ and } \quad d \in [-4, 11]$

B. $a \in [0, 2], \quad b \in [-47, -43], \quad c \in [0.25, 1.76], \text{ and } \quad d \in [6, 14]$

C. $a \in [10, 21], \quad b \in [-5, 0], \quad c \in [2.33, 3.28], \text{ and } \quad d \in [-4, 11]$

D. $a \in [5, 9], \quad b \in [-5, 0], \quad c \in [8.1, 9.59], \text{ and } \quad d \in [-4, 11]$

E. None of the above.

6. 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. $a \in [0.32, 1.87], \quad b \in [25, 38], \quad c \in [0.57, 1.55], \text{ and } \quad d \in [28, 35]$

B. $a \in [1.35, 3.14], \quad b \in [1, 10], \quad c \in [17.02, 20.02], \text{ and } \quad d \in [3, 6]$

C. $a \in [16.04, 18.73], \quad b \in [1, 10], \quad c \in [1.19, 2.49], \text{ and } \quad d \in [3, 6]$

D. $a \in [5.34, 6.94], \quad b \in [1, 10], \quad c \in [5.69, 7.04], \text{ and } \quad d \in [3, 6]$

E. None of the above.

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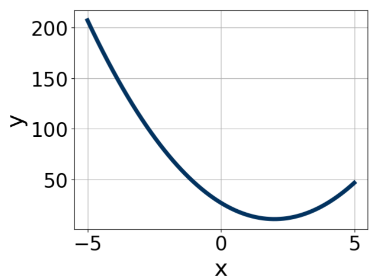
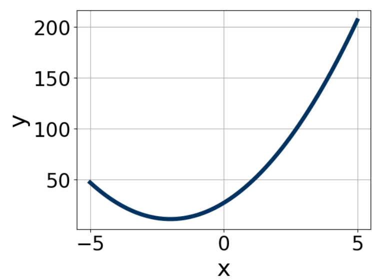
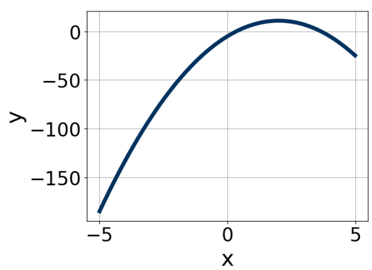
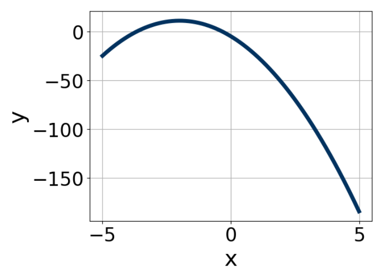
7. Graph the equation below.

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

A. 

C. 

B. 

D. 

E. None of the above.

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

$$15x^2 + 2x - 24 = 0$$

A. $x_1 \in [-1.74, -0.68]$ and $x_2 \in [1.09, 1.24]$

B. $x_1 \in [-3.66, -1.59]$ and $x_2 \in [0.57, 0.6]$

C. $x_1 \in [-1.12, -0.55]$ and $x_2 \in [2.35, 2.48]$

D. $x_1 \in [-6.32, -2.89]$ and $x_2 \in [0.3, 0.51]$

E. $x_1 \in [-21.35, -19.97]$ and $x_2 \in [17.92, 18.32]$

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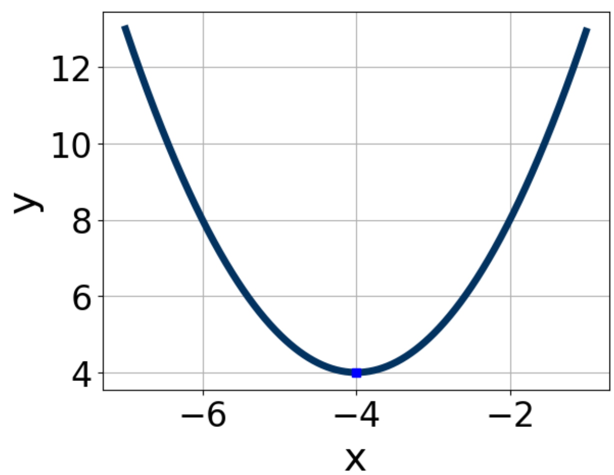
9. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b,$ and c belong to.



A. $a \in [0, 2], \quad b \in [-10, -7], \text{ and } \quad c \in [17, 21]$

B. $a \in [-1, 0], \quad b \in [-10, -7], \text{ and } \quad c \in [-12, -10]$

C. $a \in [0, 2], \quad b \in [4, 9], \text{ and } \quad c \in [17, 21]$

D. $a \in [0, 2], \quad b \in [-10, -7], \text{ and } \quad c \in [8, 14]$

E. $a \in [-1, 0], \quad b \in [4, 9], \text{ and } \quad c \in [-12, -10]$

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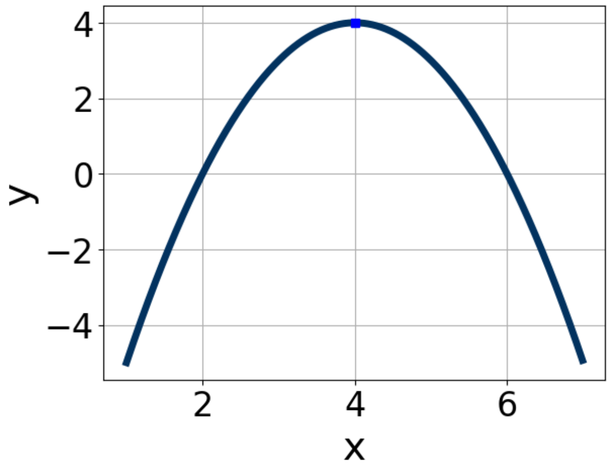
10. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b,$ and c belong to.



A. $a \in [0.1, 2.2], \quad b \in [5, 9], \text{ and } \quad c \in [18, 22]$

B. $a \in [-1.6, -0.9], \quad b \in [-11, -6], \text{ and } \quad c \in [-22, -14]$

C. $a \in [0.1, 2.2], \quad b \in [-11, -6], \text{ and } \quad c \in [18, 22]$

D. $a \in [-1.6, -0.9], \quad b \in [5, 9], \text{ and } \quad c \in [-13, -9]$

E. $a \in [-1.6, -0.9], \quad b \in [-11, -6], \text{ and } \quad c \in [-13, -9]$
