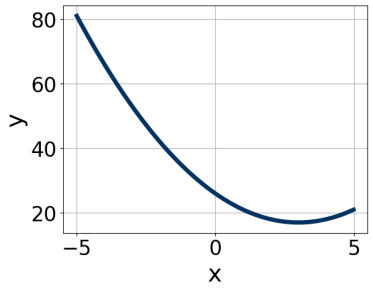
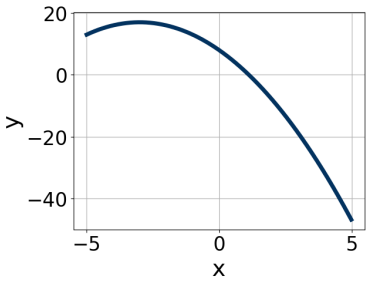
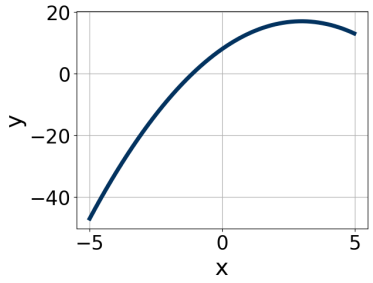
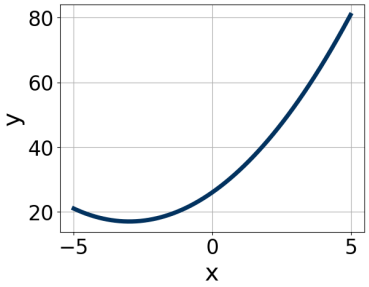
1. Graph the equation below.

$$f(x) = -(x-3)^2 + 17$$

A. 

C. 

B. 

D. 

E. None of the above.

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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).

$$17x^2 - 15x - 9 = 0$$

A. $x_1 \in [-29.5, -28]$ and $x_2 \in [28.4, 29.7]$

B. $x_1 \in [-8, -6.7]$ and $x_2 \in [20.5, 23.2]$

C. $x_1 \in [-2.6, -0.9]$ and $x_2 \in [0.2, 1.1]$

D. $x_1 \in [-0.5, 0.4]$ and $x_2 \in [1.2, 2.9]$

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 $x_1 \leq x_2$.

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

A. $x_1 \in [-6.12, -5.71]$ and $x_2 \in [-0.1, 0.4]$

B. $x_1 \in [-18.29, -17.87]$ and $x_2 \in [19.9, 20.05]$

C. $x_1 \in [-2.42, -2.16]$ and $x_2 \in [0.47, 0.98]$

D. $x_1 \in [-1.13, -0.44]$ and $x_2 \in [2.6, 3.13]$

E. $x_1 \in [-1.34, -1.07]$ and $x_2 \in [1.16, 1.37]$

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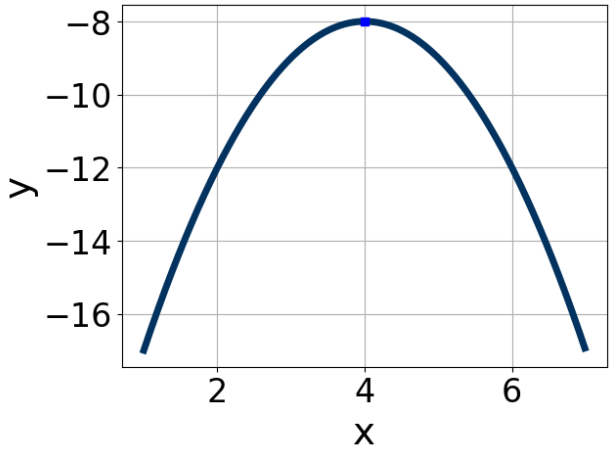
4. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



A. $a \in [-1.1, -0.3]$, $b \in [-9, -4]$, and $c \in [-24, -20]$

B. $a \in [0, 2.4]$, $b \in [-9, -4]$, and $c \in [7, 9]$

C. $a \in [-1.1, -0.3]$, $b \in [-9, -4]$, and $c \in [-9, -6]$

D. $a \in [0, 2.4]$, $b \in [8, 10]$, and $c \in [7, 9]$

E. $a \in [-1.1, -0.3]$, $b \in [8, 10]$, and $c \in [-24, -20]$

---

5. 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. $a \in [2.3, 5.3]$, $b \in [-5, -4]$, $c \in [10, 12.4]$, and $d \in [-9, -4]$

B. $a \in [3.4, 6.6]$, $b \in [-5, -4]$, $c \in [5.2, 9.8]$, and $d \in [-9, -4]$

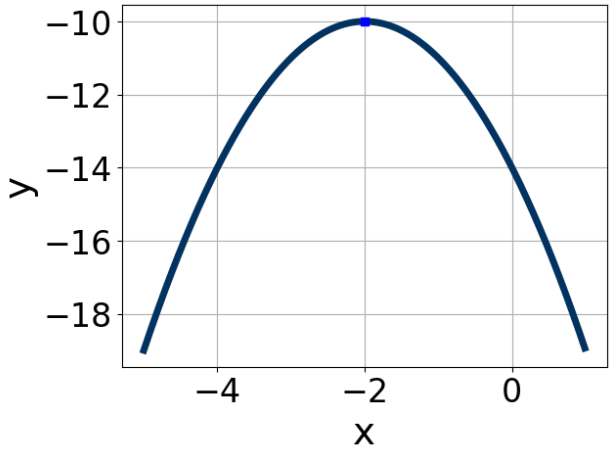
C. $a \in [11.7, 13.1]$, $b \in [-5, -4]$, $c \in [1.9, 4.1]$, and $d \in [-9, -4]$

D. $a \in [-0.6, 1.1]$, $b \in [-34, -27]$, $c \in [-0.8, 1.4]$, and $d \in [-35, -27]$

E. None of the above.

---

6. 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. $a \in [0, 4]$, $b \in [2, 7]$, and $c \in [-6, -5]$

B. $a \in [0, 4]$, $b \in [-4, -1]$, and $c \in [-6, -5]$

C. $a \in [-4, 0]$, $b \in [2, 7]$, and $c \in [5, 8]$

D. $a \in [-4, 0]$, $b \in [-4, -1]$, and $c \in [-14, -10]$

E. $a \in [-4, 0]$, $b \in [2, 7]$, and $c \in [-14, -10]$

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

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

A. $x_1 \in [-1.52, -0.85]$ and $x_2 \in [-1.12, -0.8]$

B. $x_1 \in [-1.78, -1.45]$ and $x_2 \in [-0.68, -0.53]$

C. $x_1 \in [-2.75, -2.1]$ and $x_2 \in [-0.42, -0.26]$

D. $x_1 \in [-30.38, -29.84]$ and $x_2 \in [-20.28, -19.95]$

E. $x_1 \in [-6.22, -5.97]$ and $x_2 \in [-0.26, -0.15]$

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8. 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. $a \in [2.78, 4.57]$, $b \in [-3, -1]$, $c \in [4.7, 11.7]$, and $d \in [0, 8]$

B. $a \in [0.86, 1.33]$, $b \in [-19, -16]$, $c \in [-0.5, 1.9]$, and $d \in [17, 27]$

C. $a \in [1.02, 2.41]$, $b \in [-3, -1]$, $c \in [9.4, 16.1]$, and $d \in [0, 8]$

D. $a \in [11.87, 13.85]$, $b \in [-3, -1]$, $c \in [1.7, 3.4]$, and $d \in [0, 8]$

E. None of the above.

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

$$19x^2 - 9x - 2 = 0$$

A. $x_1 \in [-0.48, 0.13]$ and $x_2 \in [0.51, 0.67]$

B. $x_1 \in [-3.37, -3]$ and $x_2 \in [11.25, 12.8]$

C. $x_1 \in [-1.04, -0.42]$ and $x_2 \in [-0.24, 0.26]$

D. $x_1 \in [-15.25, -14.96]$ and $x_2 \in [15.15, 16.25]$

E. There are no Real solutions.

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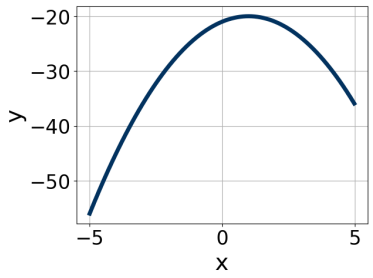
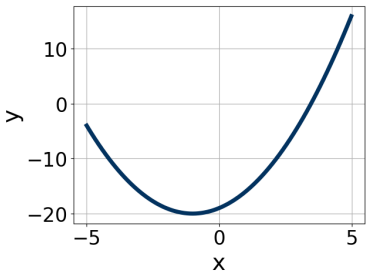
10. Graph the equation below.

$$f(x) = (x + 1)^2 - 20$$

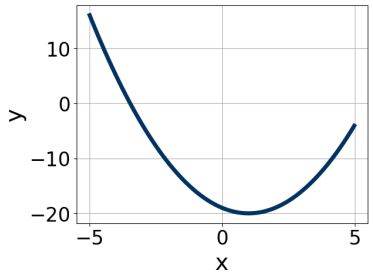
A.



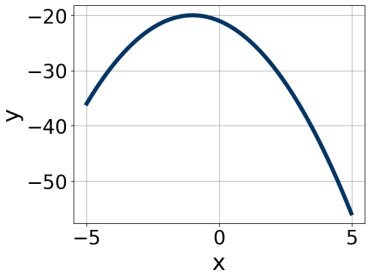
C.



B.



D.



E. None of the above.