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

$$-17x^2 - 7x + 4 = 0$$

A. $x_1 \in [-18.9, -16.7]$ and $x_2 \in [17.18, 17.91]$

B. $x_1 \in [-7.5, -4.1]$ and $x_2 \in [12.4, 12.88]$

C. $x_1 \in [-1.5, -0.4]$ and $x_2 \in [-0.14, 0.44]$

D. $x_1 \in [-0.6, 1]$ and $x_2 \in [0.66, 0.82]$

E. There are no Real solutions.

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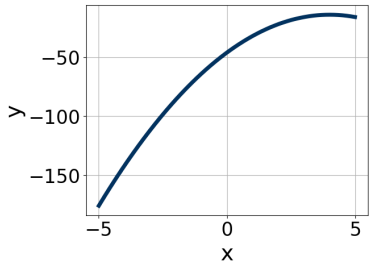
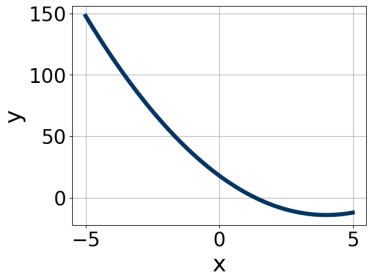
2. Graph the equation below.

$$f(x) = (x+4)^2 - 14$$

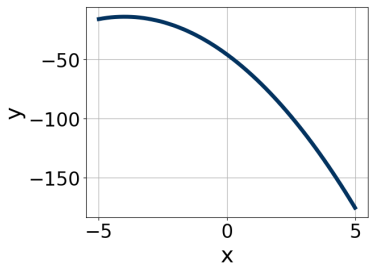
A.



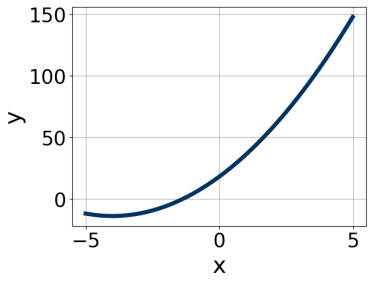
C.



B.



D.



E. None of the above.

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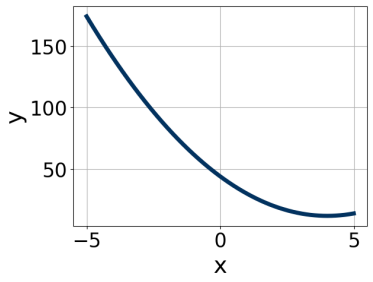
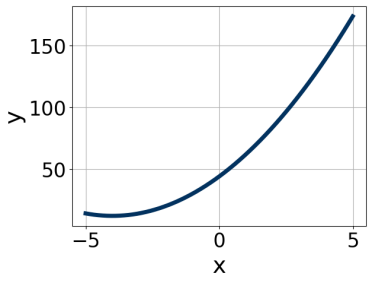
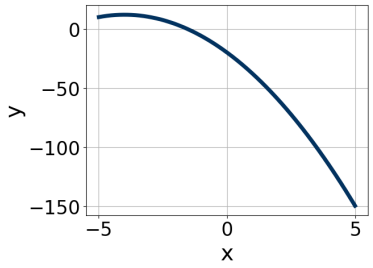
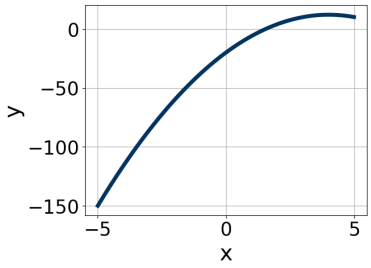
3. Graph the equation below.

$$f(x) = -(x-4)^2 + 12$$

A. 

C. 

B. 

D. 

E. None of the above.

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

$$10x^2 - 63x + 81 = 0$$

A. $x_1 \in [0.88, 0.98]$ and $x_2 \in [8.4, 10.3]$

B. $x_1 \in [1.78, 1.95]$ and $x_2 \in [-0.7, 5]$

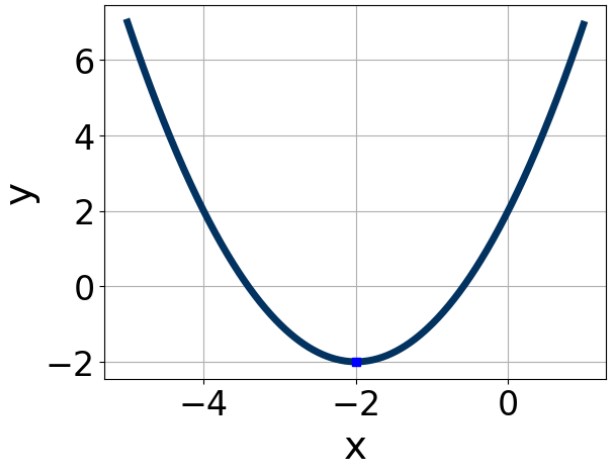
C. $x_1 \in [17.88, 18.09]$ and $x_2 \in [43.2, 47.5]$

D. $x_1 \in [0.54, 0.64]$ and $x_2 \in [11.3, 14.9]$

E. $x_1 \in [1.47, 1.54]$ and $x_2 \in [4.7, 5.6]$

---

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

B. $a \in [1, 2]$, $b \in [-4, -2]$, and $c \in [5, 7]$

C. $a \in [-4, 0]$, $b \in [3, 6]$, and $c \in [-7, -3]$

D. $a \in [1, 2]$, $b \in [3, 6]$, and $c \in [2, 4]$

E. $a \in [-4, 0]$, $b \in [-4, -2]$, and $c \in [-7, -3]$

---

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

$$54x^2 - 21x - 20$$

A. $a \in [15.87, 18.8]$, $b \in [-7, 2]$, $c \in [1.8, 5.3]$, and $d \in [2, 8]$

B. $a \in [0.55, 1.3]$, $b \in [-45, -40]$, $c \in [-2.9, 1.1]$, and $d \in [21, 29]$

C. $a \in [1.45, 2.22]$, $b \in [-7, 2]$, $c \in [25.6, 27.6]$, and $d \in [2, 8]$

D. $a \in [4.61, 7.05]$, $b \in [-7, 2]$, $c \in [7.6, 12.9]$, and $d \in [2, 8]$

E. None of the above.

---

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

$$10x^2 - 57x + 54 = 0$$

A. $x_1 \in [0.39, 0.69]$ and $x_2 \in [7.93, 9.23]$

B. $x_1 \in [1.31, 1.63]$ and $x_2 \in [3.19, 3.63]$

C. $x_1 \in [0.87, 0.97]$ and $x_2 \in [5.9, 6.02]$

D. $x_1 \in [0.93, 1.26]$ and $x_2 \in [4.17, 4.51]$

E. $x_1 \in [11.87, 12.39]$ and $x_2 \in [44.71, 45.36]$

---

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

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

A. $a \in [2.9, 3.9]$, $b \in [3, 6]$, $c \in [9.3, 13.4]$, and $d \in [2, 11]$

B. $a \in [5.2, 7.6]$, $b \in [3, 6]$, $c \in [5.4, 6.6]$, and $d \in [2, 11]$

C. $a \in [-1.4, 2.8]$, $b \in [26, 31]$, $c \in [0.2, 1.7]$, and $d \in [29, 32]$

D. $a \in [11.9, 13.1]$, $b \in [3, 6]$, $c \in [1.2, 5.9]$, and $d \in [2, 11]$

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).

$$19x^2 - 8x - 4 = 0$$

A. $x_1 \in [-0.53, 0.41]$ and $x_2 \in [0.51, 1.25]$

B. $x_1 \in [-2.33, -0.65]$ and $x_2 \in [-0.2, 0.6]$

C. $x_1 \in [-19.55, -18.55]$ and $x_2 \in [18.06, 19.85]$

D. $x_1 \in [-6.09, -4.74]$ and $x_2 \in [12.77, 14.98]$

E. There are no Real solutions.

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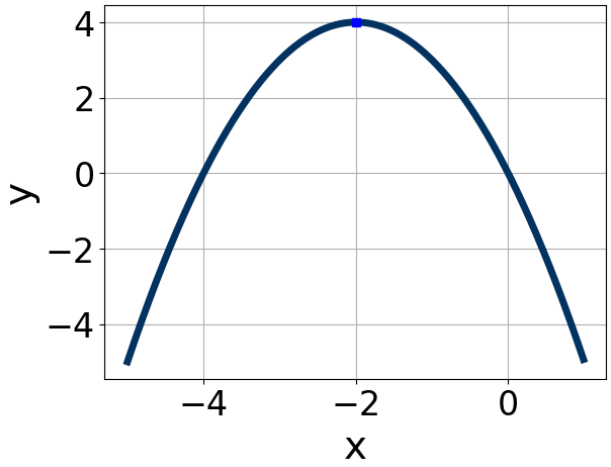
10. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



A. $a \in [0.9, 3]$, $b \in [-4, -1]$, and $c \in [6, 10]$

B. $a \in [-1.6, 0.7]$, $b \in [3, 5]$, and $c \in [0, 1]$

C. $a \in [-1.6, 0.7]$, $b \in [3, 5]$, and $c \in [-8, -7]$

D. $a \in [-1.6, 0.7]$, $b \in [-4, -1]$, and $c \in [0, 1]$

E. $a \in [0.9, 3]$, $b \in [3, 5]$, and $c \in [6, 10]$