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

$$-11x^2 - 12x + 8 = 0$$

A. $x_1 \in [-0.47, 2.53]$ and $x_2 \in [1.1, 3]$

B. $x_1 \in [-6.14, -3.14]$ and $x_2 \in [15.4, 18.6]$

C. $x_1 \in [-1.56, -0.56]$ and $x_2 \in [-1, 1.5]$

D. $x_1 \in [-25.82, -19.82]$ and $x_2 \in [21, 23.4]$

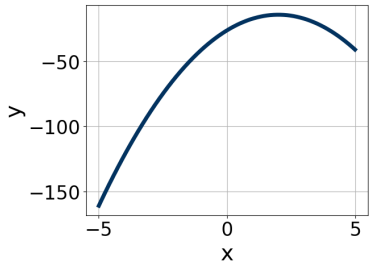
E. There are no Real solutions.

---

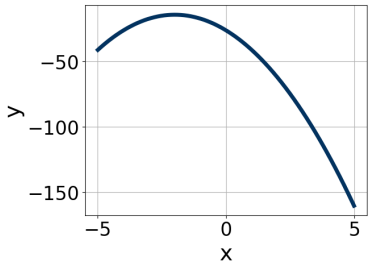
2. Graph the equation below.

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

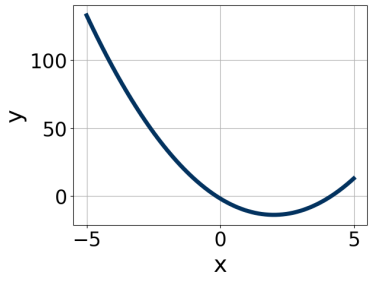
A.



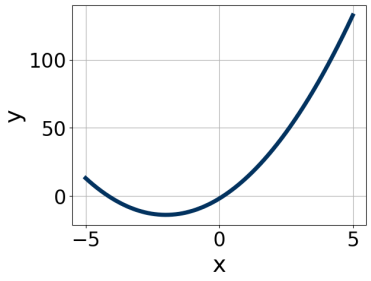
C.



B.



D.



E. None of the above.

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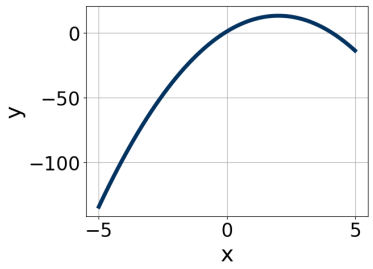
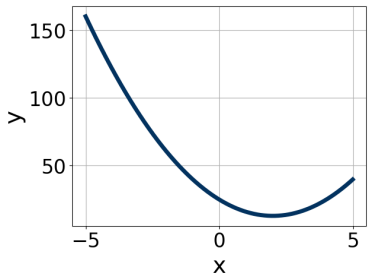
3. Graph the equation below.

$$f(x) = (x-2)^2 + 13$$

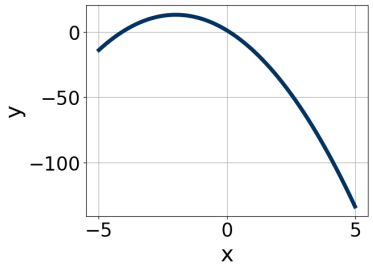
A.



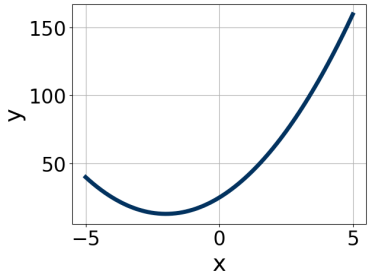
C.



B.



D.



E. None of the above.

---

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

$$25x^2 - 15x - 54 = 0$$

A. $x_1 \in [-31.56, -29.87]$ and $x_2 \in [44.88, 45.74]$

B. $x_1 \in [-6.24, -5.89]$ and $x_2 \in [-0.18, 0.58]$

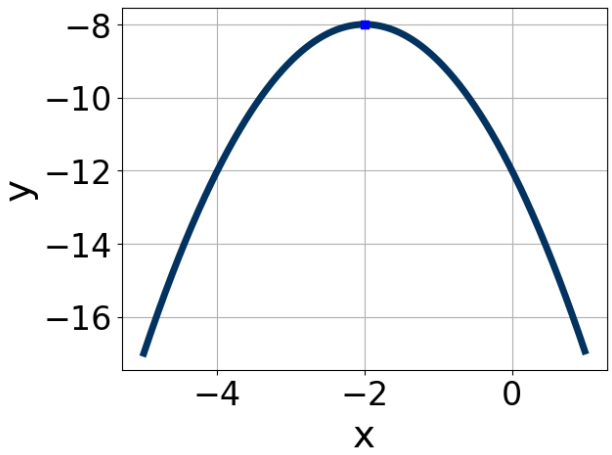
C. $x_1 \in [-4.81, -2.99]$ and $x_2 \in [0.43, 1.43]$

D. $x_1 \in [-0.66, 0.75]$ and $x_2 \in [3.07, 4.1]$

E. $x_1 \in [-2.23, -0.95]$ and $x_2 \in [1.33, 1.92]$

---

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. $a \in [1, 3]$, $b \in [3, 7]$, and $c \in [-7, 1]$

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

C. $a \in [-3, 0]$, $b \in [3, 7]$, and $c \in [-12, -11]$

D. $a \in [1, 3]$, $b \in [-6, -1]$, and $c \in [-7, 1]$

E. $a \in [-3, 0]$, $b \in [-6, -1]$, and $c \in [-12, -11]$

---

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

$$54x^2 + 75x + 25$$

A. $a \in [5.3, 8.7]$, $b \in [4, 7]$, $c \in [8.35, 9.98]$, and $d \in [2, 7]$

B. $a \in [15.9, 20]$, $b \in [4, 7]$, $c \in [1.64, 3.11]$, and $d \in [2, 7]$

C. $a \in [0.5, 2.3]$, $b \in [26, 35]$, $c \in [-0.06, 1.12]$, and $d \in [45, 46]$

D. $a \in [2.3, 3.6]$, $b \in [4, 7]$, $c \in [16.26, 18.25]$, and $d \in [2, 7]$

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 $x_1 \leq x_2$.

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

A. $x_1 \in [-6.9, -4.15]$ and $x_2 \in [-0.26, -0.22]$

B. $x_1 \in [-2.11, 0.81]$ and $x_2 \in [-1.45, -0.96]$

C. $x_1 \in [-3.84, -2.54]$ and $x_2 \in [-0.57, -0.37]$

D. $x_1 \in [-3.18, -2.11]$ and $x_2 \in [-0.82, -0.53]$

E. $x_1 \in [-30.31, -29.48]$ and $x_2 \in [-30.07, -29.91]$

---

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. $a \in [11.2, 15.4]$, $b \in [1, 7]$, $c \in [2.5, 4.7]$, and $d \in [4, 7]$

B. $a \in [-0.7, 2]$, $b \in [24, 32]$, $c \in [-0.3, 2]$, and $d \in [24, 32]$

C. $a \in [5.4, 7.1]$, $b \in [1, 7]$, $c \in [5.7, 8.3]$, and $d \in [4, 7]$

D. $a \in [2.5, 3.3]$, $b \in [1, 7]$, $c \in [10, 13.1]$, and $d \in [4, 7]$

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).

$$-17x^2 - 13x + 9 = 0$$

A. $x_1 \in [-2.8, -0.5]$ and $x_2 \in [-1.4, 0.9]$

B. $x_1 \in [-0.9, 2.6]$ and $x_2 \in [0.7, 2.3]$

C. $x_1 \in [-29.4, -27.3]$ and $x_2 \in [25.8, 27.9]$

D. $x_1 \in [-9.1, -5.5]$ and $x_2 \in [18.3, 20.8]$

E. There are no Real solutions.

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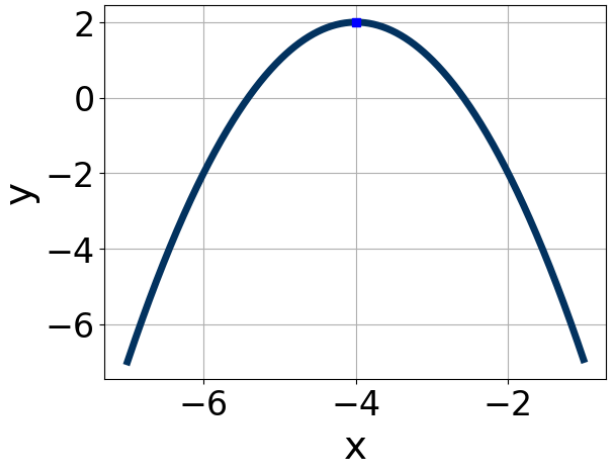
10. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



A. $a \in [1, 4]$, $b \in [-10, -6]$, and $c \in [15, 20]$

B. $a \in [-2, 0]$, $b \in [7, 15]$, and $c \in [-16, -10]$

C. $a \in [-2, 0]$, $b \in [7, 15]$, and $c \in [-19, -17]$

D. $a \in [1, 4]$, $b \in [7, 15]$, and $c \in [15, 20]$

E. $a \in [-2, 0]$, $b \in [-10, -6]$, and $c \in [-16, -10]$
