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

$$13x^2 + 10x - 4 = 0$$

   A. $x_1 \in [-1, -0.28]$ and $x_2 \in [0.6, 2.8]$

   B. $x_1 \in [-18.81, -17.81]$ and $x_2 \in [16.2, 18.8]$

   C. $x_1 \in [-2.04, -0.73]$ and $x_2 \in [0.1, 0.5]$

   D. $x_1 \in [-14.09, -13.48]$ and $x_2 \in [2.3, 3.9]$

   E. There are no Real solutions.

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

$$-20x^2 - 14x + 2 = 0$$

   A. $x_1 \in [-1.4, -0.76]$ and $x_2 \in [-0.54, 0.36]$

   B. $x_1 \in [-2.47, -2.41]$ and $x_2 \in [16.27, 17.01]$

   C. $x_1 \in [-19.95, -18.57]$ and $x_2 \in [18.46, 18.56]$

   D. $x_1 \in [-0.56, 0.93]$ and $x_2 \in [0.64, 1.12]$
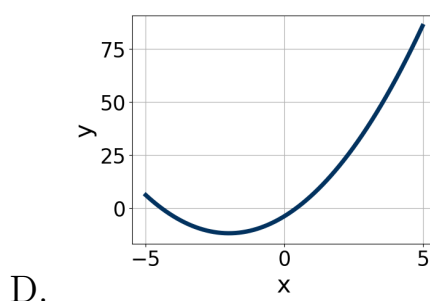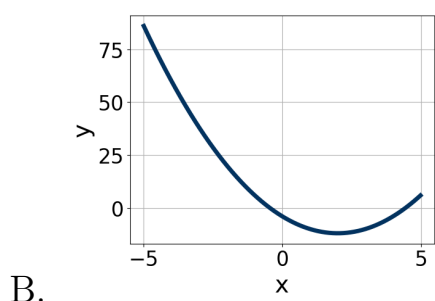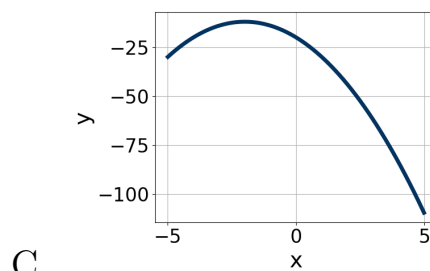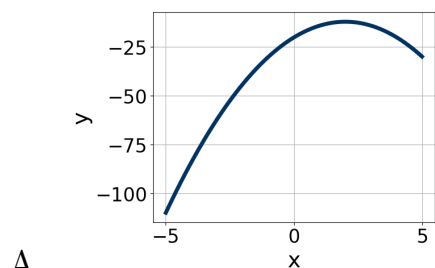
   E. There are no Real solutions.

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

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

   A. $x_1 \in [19.86, 20.01]$ and $x_2 \in [29.85, 30.14]$

   B. $x_1 \in [0.4, 0.45]$ and $x_2 \in [2.16, 2.89]$

   C. $x_1 \in [0.51, 0.63]$ and $x_2 \in [1.41, 2.02]$

   D. $x_1 \in [0.21, 0.38]$ and $x_2 \in [3.68, 4.15]$

   E. $x_1 \in [0.75, 0.86]$ and $x_2 \in [1.07, 1.44]$

4. Graph the equation below.

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

A.

B.

C.

D.

E. None of the above.

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

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

A. $a \in [11.9, 13.4], \quad b \in [2, 11], \quad c \in [1.1, 3.6],$ and $\quad d \in [5, 7]$

B. $a \in [0.6, 2.4], \quad b \in [24, 40], \quad c \in [-1.7, 2.9],$ and $\quad d \in [30, 35]$

C. $a \in [2.8, 4.5], \quad b \in [2, 11], \quad c \in [9, 13.2],$ and $\quad d \in [5, 7]$

D. $a \in [4, 6.2], \quad b \in [2, 11], \quad c \in [5.5, 8.6],$ and $\quad d \in [5, 7]$
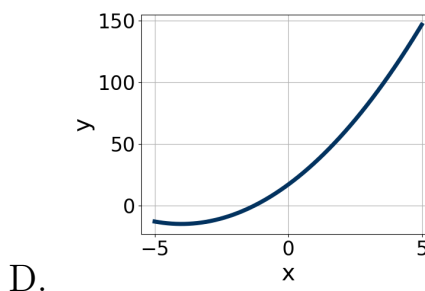
E. None of the above.
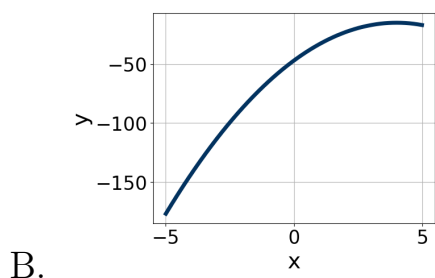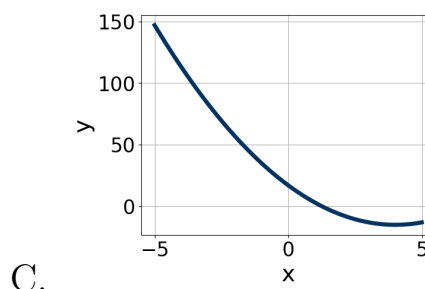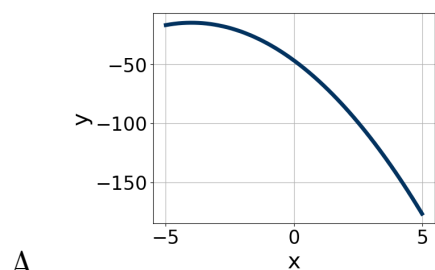
6. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax + b)(cx + d); b \le d$.

$$24x^2 - 38x + 15$$

A. $a \in [3.9, 6.1]$, $b \in [-9, -3]$, $c \in [2.8, 5.08]$, and $d \in [-3, 3]$

B. $a \in [1.3, 4]$, $b \in [-9, -3]$, $c \in [6.61, 8.68]$, and $d \in [-3, 3]$

C. $a \in [-1.4, 2.1]$, $b \in [-24, -18]$, $c \in [-0.37, 1.63]$, and $d \in [-19, -15]$

D. $a \in [7.4, 12.2]$, $b \in [-9, -3]$, $c \in [1.72, 2.76]$, and $d \in [-3, 3]$

E. None of the above.

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7. Graph the equation below.

$$f(x) = (x + 4)^2 - 15$$

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 $x_1 \leq x_2$.
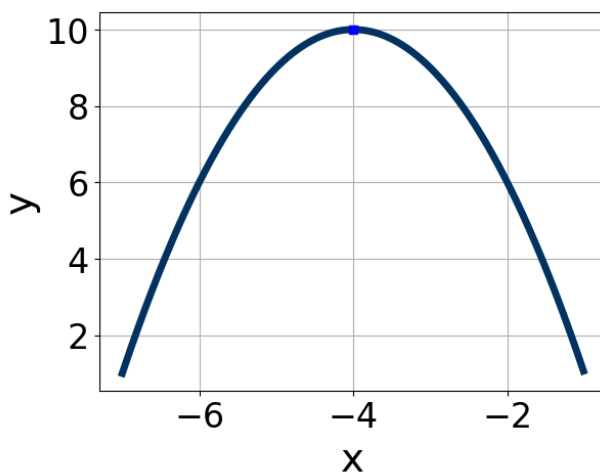
$$20x^2 + 21x - 54 = 0$$

A. $x_1 \in [-10.23, -8.78]$ and $x_2 \in [0.1, 0.37]$

B. $x_1 \in [-45.23, -44.45]$ and $x_2 \in [23.88, 24.04]$

C. $x_1 \in [-4.41, -1.2]$ and $x_2 \in [1.11, 1.36]$

D. $x_1 \in [-7.7, -6.16]$ and $x_2 \in [0.39, 0.43]$

E. $x_1 \in [-1.4, 0.74]$ and $x_2 \in [2.36, 2.49]$

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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.

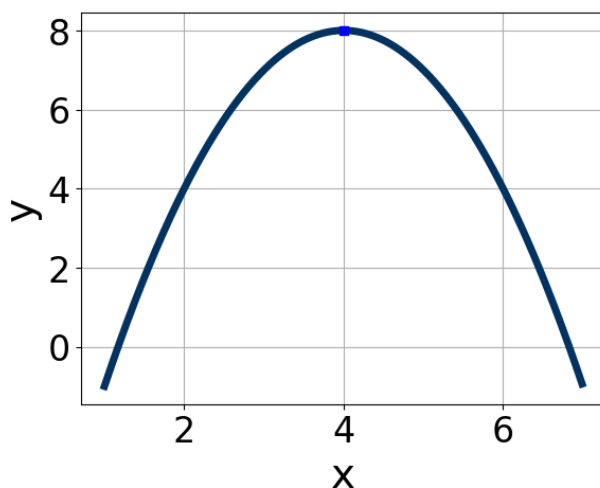A. $a \in [-2.6, -0.2]$, $b \in [-9, -4]$, and $c \in [-8, -5]$

B. $a \in [-2.6, -0.2]$, $b \in [8, 9]$, and $c \in [-8, -5]$

C. $a \in [0.7, 3.3]$, $b \in [-9, -4]$, and $c \in [26, 28]$

D. $a \in [0.7, 3.3]$, $b \in [8, 9]$, and $c \in [26, 28]$

E. $a \in [-2.6, -0.2]$, $b \in [8, 9]$, and $c \in [-26, -24]$

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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. $a \in [-1.6, 0]$, $b \in [-10, -6]$, and $c \in [-8, -6]$

B. $a \in [-1.6, 0]$, $b \in [-10, -6]$, and $c \in [-24, -21]$

C. $a \in [-1.6, 0]$, $b \in [8, 11]$, and $c \in [-8, -6]$

D. $a \in [-0.8, 2.1]$, $b \in [8, 11]$, and $c \in [22, 25]$

E. $a \in [-0.8, 2.1]$, $b \in [-10, -6]$, and $c \in [22, 25]$