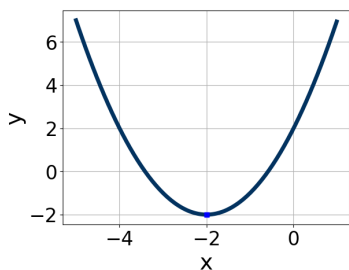16. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b$, and $c$ belong to.



A. $a \in [-0.9, 1.6]$,    $b \in [-7, -3]$, and    $c \in [1, 5]$

B. $a \in [-1.9, -0.7]$,    $b \in [-7, -3]$, and    $c \in [-11, -2]$

C. $a \in [-0.9, 1.6]$,    $b \in [3, 7]$, and    $c \in [1, 5]$

D. $a \in [-1.9, -0.7]$,    $b \in [3, 7]$, and    $c \in [-11, -2]$

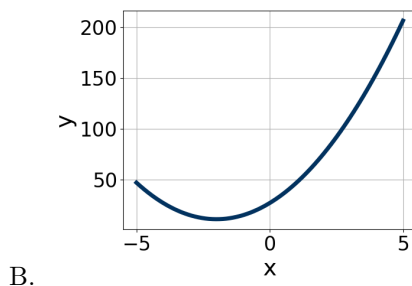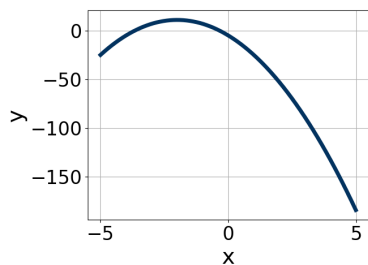E. $a \in [-0.9, 1.6]$,    $b \in [-7, -3]$, and    $c \in [4, 10]$

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17. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).
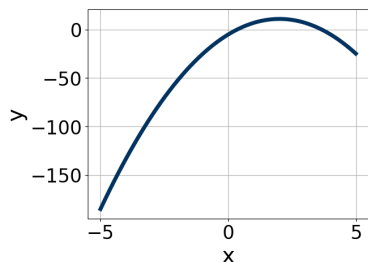
$$12x^2 - 13x - 2 = 0$$

A. $x_1 \in [-0.6, -0.11]$ and $x_2 \in [0.87, 1.44]$

B. $x_1 \in [-1.75, -1.63]$ and $x_2 \in [14.31, 15.58]$

C. $x_1 \in [-1.52, -0.87]$ and $x_2 \in [0.06, 0.27]$

D. $x_1 \in [-16.4, -15.14]$ and $x_2 \in [16.49, 16.87]$
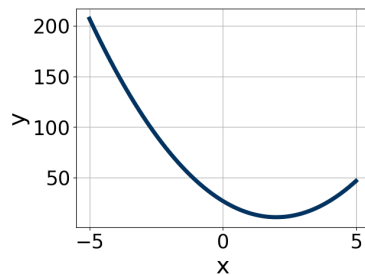
E. There are no Real solutions.

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18. Graph the equation below.

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



A.



B.

C.



D.

E. None of the above.

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19. 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. $x_1 \in [1.07, 1.22]$ and $x_2 \in [1.03, 1.33]$

B. $x_1 \in [29.98, 30.04]$ and $x_2 \in [29.83, 30.98]$

C. $x_1 \in [0.19, 0.25]$ and $x_2 \in [5.28, 7.62]$

D. $x_1 \in [0.34, 0.59]$ and $x_2 \in [3.31, 4.17]$

E. $x_1 \in [0.57, 0.6]$ and $x_2 \in [1.27, 2.75]$

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20. 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. $a \in [-6, 2]$,     $b \in [-16, -8]$,     $c \in [-0.28, 1.79]$, and     $d \in [39, 46]$

B. $a \in [3, 7]$,     $b \in [-4, 5]$,     $c \in [11.33, 13.17]$, and     $d \in [-2, 9]$

C. $a \in [8, 18]$,     $b \in [-4, 5]$,     $c \in [5.92, 7.92]$, and     $d \in [-2, 9]$

D. $a \in [23, 28]$,     $b \in [-4, 5]$,     $c \in [1.94, 2.21]$, and     $d \in [-2, 9]$

E. None of the above.

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