16. 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. $a \in [5.5, 6.95], \quad b \in [-9, -4], \quad c \in [5.7, 8.1], \text{ and } \quad d \in [-6, -3]$

B. $a \in [11.68, 12.15], \quad b \in [-9, -4], \quad c \in [2.5, 3.8], \text{ and } \quad d \in [-6, -3]$

C. $a \in [1.59, 3.4], \quad b \in [-9, -4], \quad c \in [17.6, 20.4], \text{ and } \quad d \in [-6, -3]$

D. $a \in [0.6, 1.01], \quad b \in [-32, -25], \quad c \in [-0.2, 1.2], \text{ and } \quad d \in [-37, -26]$

E. None of the above.

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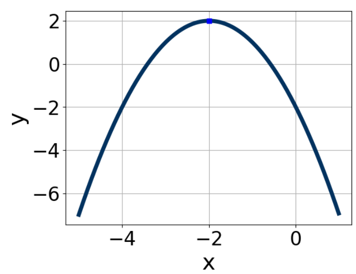
17. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b,$ and c belong to.



A. $a \in [-3, 0], \quad b \in [3, 7], \text{ and } \quad c \in [-10, -3]$

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

C. $a \in [-3, 0], \quad b \in [-7, -3], \text{ and } \quad c \in [-4, 3]$

D. $a \in [0, 3], \quad b \in [3, 7], \text{ and } \quad c \in [5, 7]$

E. $a \in [0, 3], \quad b \in [-7, -3], \text{ and } \quad c \in [5, 7]$

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18. 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. $x_1 \in [-20.36, -18.44]$ and $x_2 \in [17.68, 18.25]$

B. $x_1 \in [-1.9, -1.25]$ and $x_2 \in [1.14, 2.13]$

C. $x_1 \in [-3.67, -1.84]$ and $x_2 \in [0.44, 0.65]$

D. $x_1 \in [-4.43, -3.18]$ and $x_2 \in [0.32, 0.41]$

E. $x_1 \in [-0.65, 1.56]$ and $x_2 \in [2.73, 4.57]$

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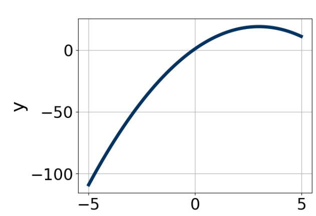
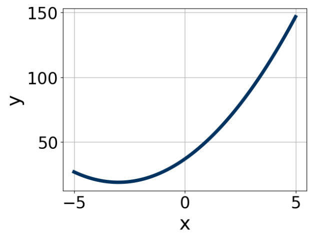
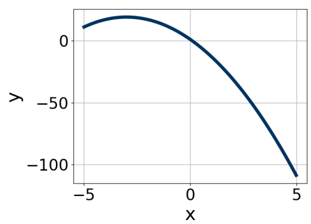
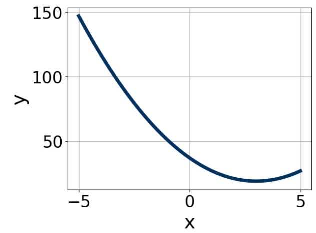
19. Graph the equation $f(x) = 19 - 2(x-3)^2$.



A.

B. 

C. 

D. 

E. None of the above

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

$$-11x^2 + 10x + 4 = 0$$

A. $x_1 \in [-16.9, -14.2]$ and $x_2 \in [16.93, 17.53]$

B. $x_1 \in [-0.7, 1]$ and $x_2 \in [0.91, 1.55]$

C. $x_1 \in [-1.6, -0.8]$ and $x_2 \in [0.11, 0.34]$

D. $x_1 \in [-13.4, -13.1]$ and $x_2 \in [2.58, 3.68]$

E. There are no Real solutions.
