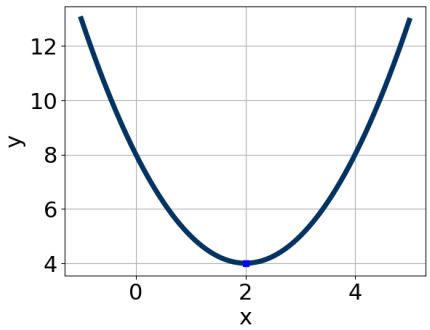
16. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



$a =$ ☐ $b =$ ☐ $c =$ ☐

A. $a \in [-2, 4]$, $b \in [-5, -3]$, and $c \in [-1, 4]$

B. $a \in [0, 3]$, $b \in [-1, 6]$, and $c \in [3, 8]$

C. $a \in [-3, 0]$, $b \in [-5, -3]$, and $c \in [-1, 4]$

D. $a \in [0, 3]$, $b \in [-5, -3]$, and $c \in [3, 8]$

E. $a \in [0, 3]$, $b \in [-1, 6]$, and $c \in [-1, 4]$

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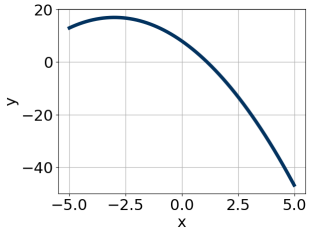
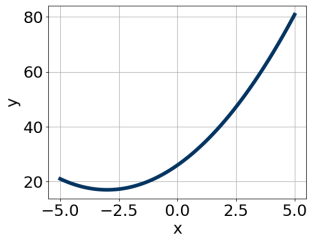
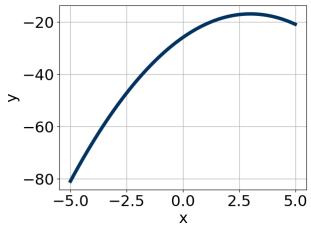
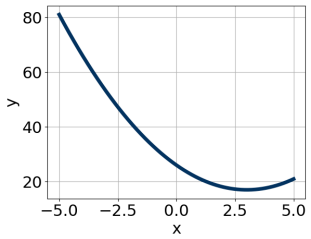
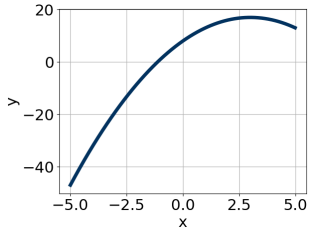
17. Graph the equation $f(x) = (x - 1)^2 - 12$.

A.


C.


D.


B.


E.


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

$$64x^2 + 48x + 9$$

$a =$ ☐ $b =$ ☐ $c =$ ☐ $d =$ ☐

A. $a \in [14.5, 17]$, $b \in [1.5, 3.5]$, $c \in [3.5, 5.5]$, and $d \in [2.5, 4]$

B. $a \in [7, 8.5]$, $b \in [1.5, 3.5]$, $c \in [7, 9]$, and $d \in [2.5, 4]$

C. $a \in [3.5, 5.5]$, $b \in [1.5, 3.5]$, $c \in [15, 17.5]$, and $d \in [2.5, 4]$

D. $a \in [-1.5, 3]$, $b \in [-3.5, -1.5]$, $c \in [63, 64.5]$, and $d \in [-4, -1.5]$

E. $a \in [-1.5, 3]$, $b \in [1.5, 3.5]$, $c \in [63, 64.5]$, and $d \in [2.5, 4]$

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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 $z_1 \leq z_2$.

$$216x^2 + 12x - 20 = 0$$

$x_1 =$ ☐ $x_2 =$ ☐

A. $x_1 \in [-0.69, -0.62]$ and $x_2 \in [0.11, 0.27]$

B. $x_1 \in [-0.05, 0.32]$ and $x_2 \in [4.9, 5.19]$

C. $x_1 \in [-0.14, -0.11]$ and $x_2 \in [0.65, 0.86]$

D. $x_1 \in [-4.1, -3.89]$ and $x_2 \in [-0.16, 0.12]$

E. $x_1 \in [-0.4, -0.15]$ and $x_2 \in [0.24, 0.4]$

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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).

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

$x_1 =$ ☐ $x_2 =$ ☐

A. $x_1 \in [-0.52, -0.21]$ and $x_2 \in [0.43, 1.26]$

B. $x_1 \in [-3.59, -3.29]$ and $x_2 \in [4.67, 5.7]$

C. $x_1 \in [-5.53, -5.25]$ and $x_2 \in [3.35, 3.48]$

D. $x_1 \in [-0.66, -0.59]$ and $x_2 \in [0.13, 0.48]$

E. There are no Real solutions.
