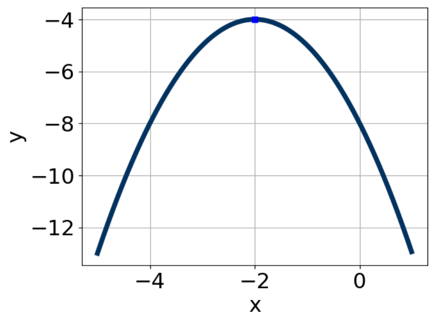
16. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that $a, b,$ and $c$ belong to.




$a =$ ☐ $b =$ ☐ $c =$ ☐

A. $a \in [0.1, 1.4], \quad b \in [0, 8], \text{ and } \quad c \in [11, 15]$

B. $a \in [-1.7, 0.3], \quad b \in [-5, -3], \text{ and } \quad c \in [-6, -1]$

C. $a \in [0.1, 1.4], \quad b \in [-5, -3], \text{ and } \quad c \in [11, 15]$

D. $a \in [-3, 3], \quad b \in [-5, -3], \text{ and } \quad c \in [-6, -1]$

E. $a \in [0.1, 1.4], \quad b \in [0, 8], \text{ and } \quad c \in [-6, -1]$

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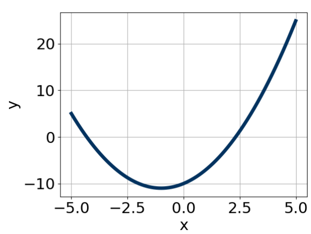
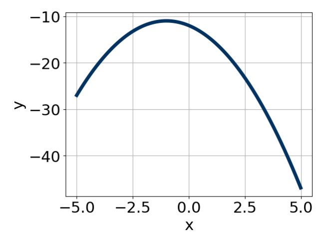
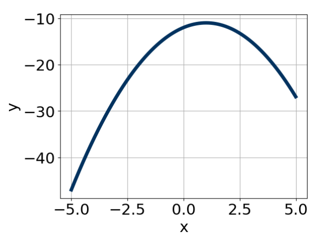
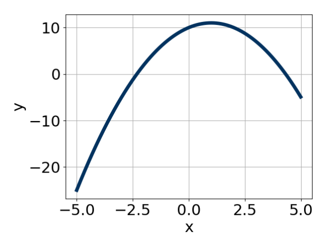
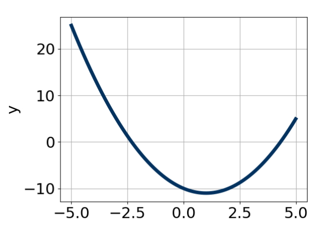
17. Graph the equation $f(x) = -(x + 3)^2 - 18$.

A. 


D. 


B. 


E. 


C. 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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. $a \in [7.5, 8.5], \quad b \in [2.5, 3.5], \quad c \in [7.5, 9], \text{ and } \quad d \in [1.5, 3.5]$

B. $a \in [0, 2], \quad b \in [2.5, 3.5], \quad c \in [62.5, 64.5], \text{ and } \quad d \in [1.5, 3.5]$

C. $a \in [15.5, 17.5], \quad b \in [2.5, 3.5], \quad c \in [3.5, 5.5], \text{ and } \quad d \in [1.5, 3.5]$

D. $a \in [0, 2], \quad b \in [-3.5, -2], \quad c \in [62.5, 64.5], \text{ and } \quad d \in [-3.5, -2]$

E. $a \in [3.5, 4.5], \quad b \in [2.5, 3.5], \quad c \in [15, 17], \text{ and } \quad d \in [1.5, 3.5]$

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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 $z_1 \leq z_2$.

$$144x^2 - 16 = 0$$

$x_1 =$ ☐ $x_2 =$ ☐

A. $x_1 \in [-4.04, -3.81]$ and $x_2 \in [-0.02, 0.09]$

B. $x_1 \in [-1.17, -0.82]$ and $x_2 \in [0.1, 0.18]$

C. $x_1 \in [-0.56, -0.29]$ and $x_2 \in [0.19, 0.56]$

D. $x_1 \in [-0.21, -0.09]$ and $x_2 \in [0.55, 0.72]$

E. $x_1 \in [-0.06, 0.03]$ and $x_2 \in [3.95, 4]$

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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).

$$6x^2 - 9x - 9 = 0$$

$x_1 =$ ☐ $x_2 =$ ☐

A. $x_1 \in [-5.3, -2.6]$ and $x_2 \in [12.6, 14]$

B. $x_1 \in [-1.6, -0.6]$ and $x_2 \in [0.9, 2.5]$

C. $x_1 \in [-14, -12.2]$ and $x_2 \in [3.6, 4.8]$

D. $x_1 \in [-2.9, -1.5]$ and $x_2 \in [-1.7, 1.3]$

E. There are no Real solutions.

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