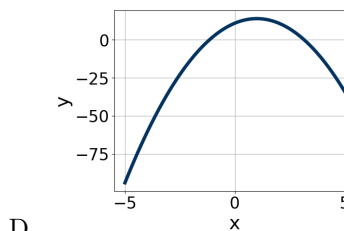
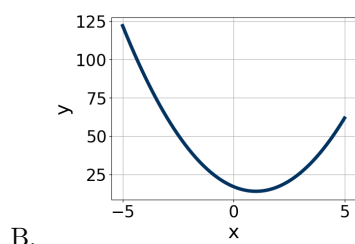
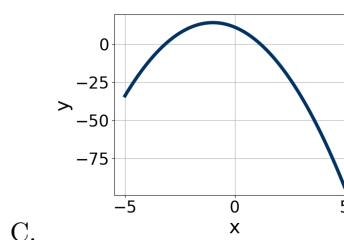
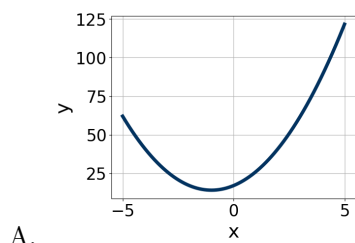


16. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with  $x_1 \leq x_2$  (if they exist).

$$-16x^2 - 15x + 5 = 0$$

- A.  $x_1 \in [-0.31, 0.54]$  and  $x_2 \in [1.1, 3.3]$   
 B.  $x_1 \in [-1.28, -0.51]$  and  $x_2 \in [-0.6, 0.7]$   
 C.  $x_1 \in [-24.05, -23.19]$  and  $x_2 \in [21.5, 24.6]$   
 D.  $x_1 \in [-4.62, -3.74]$  and  $x_2 \in [18.4, 19.5]$   
 E. There are no Real solutions.

17. Graph the equation  $f(x) = 14 - 3(x + 1)^2$ .



- E. None of the above

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

$$15x^2 + 32x + 16 = 0$$

- A.  $x_1 \in [-20.46, -19.88]$  and  $x_2 \in [-12.25, -11.85]$   
 B.  $x_1 \in [-2.7, -2.18]$  and  $x_2 \in [-0.49, -0.37]$   
 C.  $x_1 \in [-1.59, -1.04]$  and  $x_2 \in [-0.82, -0.78]$   
 D.  $x_1 \in [-1.61, -1.53]$  and  $x_2 \in [-0.76, -0.63]$   
 E.  $x_1 \in [-4.13, -3.89]$  and  $x_2 \in [-0.27, -0.08]$

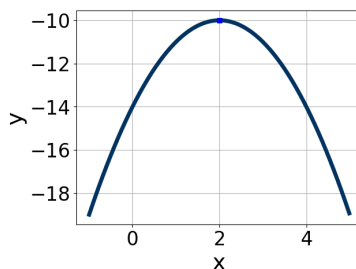
19. Factor the quadratic below. Then, choose the intervals that contain the constants in the form  $(ax + b)(cx + d); b \leq d$ .

$$24x^2 - 10x - 25$$

- A.  $a \in [1.04, 2.51]$ ,  $b \in [-12, -3]$ ,  $c \in [11.1, 12.24]$ , and  $d \in [-2, 8]$

- B.  $a \in [3.2, 5.31]$ ,  $b \in [-12, -3]$ ,  $c \in [5.74, 6.92]$ , and  $d \in [-2, 8]$   
C.  $a \in [0.93, 1.43]$ ,  $b \in [-31, -29]$ ,  $c \in [0.71, 1.21]$ , and  $d \in [16, 23]$   
D.  $a \in [10.92, 12.35]$ ,  $b \in [-12, -3]$ ,  $c \in [1.83, 2.07]$ , and  $d \in [-2, 8]$   
E. None of the above.
- 

20. 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.  $a \in [0.7, 2.9]$ ,  $b \in [-7, -1]$ , and  $c \in [-9, -1]$   
B.  $a \in [-2.7, -0.9]$ ,  $b \in [3, 6]$ , and  $c \in [-15, -12]$   
C.  $a \in [-2.7, -0.9]$ ,  $b \in [-7, -1]$ , and  $c \in [3, 8]$   
D.  $a \in [-2.7, -0.9]$ ,  $b \in [-7, -1]$ , and  $c \in [-15, -12]$   
E.  $a \in [0.7, 2.9]$ ,  $b \in [3, 6]$ , and  $c \in [-9, -1]$
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