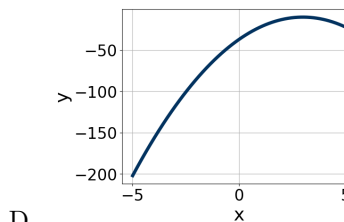
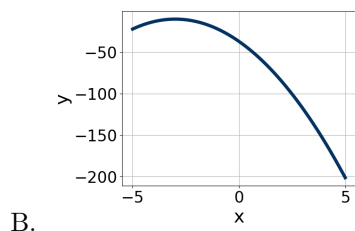
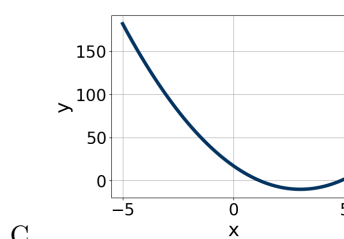
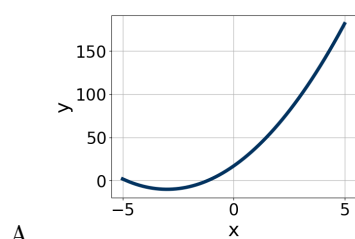


16. Solve the quadratic equation below. Then, choose the intervals that the solutions  $x_1$  and  $x_2$  belong to, with  $x_1 \leq x_2$ .

$$20x^2 - 69x + 54 = 0$$

- A.  $x_1 \in [1.15, 1.23]$  and  $x_2 \in [1.55, 2.97]$   
 B.  $x_1 \in [0.73, 0.8]$  and  $x_2 \in [2.34, 4.13]$   
 C.  $x_1 \in [0.44, 0.53]$  and  $x_2 \in [5.83, 6.56]$   
 D.  $x_1 \in [23.96, 24.05]$  and  $x_2 \in [44.72, 45.4]$   
 E.  $x_1 \in [0.39, 0.42]$  and  $x_2 \in [6.36, 7.03]$

17. Graph the equation  $f(x) = -3(x - 3)^2 - 10$ .



- E. None of the above

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

$$13x^2 + 9x - 9 = 0$$

- A.  $x_1 \in [-16.55, -16.13]$  and  $x_2 \in [5.9, 8.7]$   
 B.  $x_1 \in [-24.35, -23.3]$  and  $x_2 \in [22.4, 24.3]$   
 C.  $x_1 \in [-1.22, 0.11]$  and  $x_2 \in [0.6, 1.4]$   
 D.  $x_1 \in [-1.44, -1.15]$  and  $x_2 \in [0, 1.2]$   
 E. There are no Real solutions.

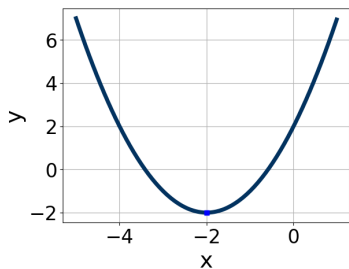
19. Factor the quadratic below. Then, choose the intervals that contain the constants in the form  $(ax + b)(cx + d)$ ;  $b \leq d$ .

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

- A.  $a \in [5.66, 6.67]$ ,  $b \in [-13, 1]$ ,  $c \in [3.4, 4.85]$ , and  $d \in [1, 9]$

- B.  $a \in [0.97, 1.74]$ ,  $b \in [-27, -17]$ ,  $c \in [0.71, 1.08]$ , and  $d \in [27, 31]$   
C.  $a \in [11.95, 12.47]$ ,  $b \in [-13, 1]$ ,  $c \in [1.48, 2.54]$ , and  $d \in [1, 9]$   
D.  $a \in [1.03, 2.92]$ ,  $b \in [-13, 1]$ ,  $c \in [11.06, 12.61]$ , and  $d \in [1, 9]$   
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.  $a \in [-1.5, 0.4]$ ,  $b \in [3, 7]$ , and  $c \in [-12, -5]$   
B.  $a \in [-1.5, 0.4]$ ,  $b \in [-6, -2]$ , and  $c \in [-12, -5]$   
C.  $a \in [-0.5, 1.6]$ ,  $b \in [3, 7]$ , and  $c \in [0, 5]$   
D.  $a \in [-0.5, 1.6]$ ,  $b \in [-6, -2]$ , and  $c \in [0, 5]$   
E.  $a \in [-0.5, 1.6]$ ,  $b \in [-6, -2]$ , and  $c \in [4, 7]$
-