

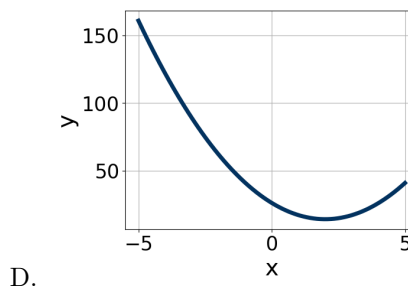
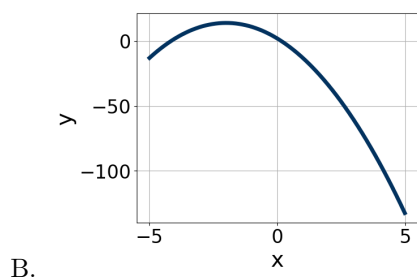
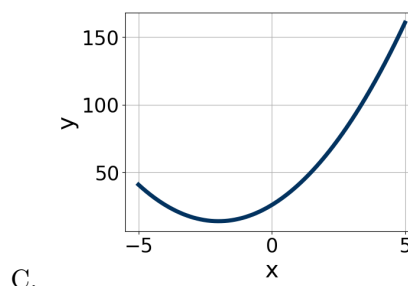
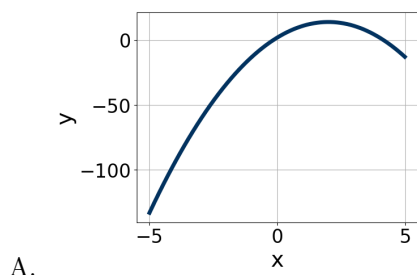
16. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with  $x_1 \leq x_2$  (if they exist).

$$14x^2 - 9x - 9 = 0$$

- A.  $x_1 \in [-7.8, -7.4]$  and  $x_2 \in [16.52, 17.25]$   
 B.  $x_1 \in [-3, -0.7]$  and  $x_2 \in [0.52, 0.77]$   
 C.  $x_1 \in [-1, 1]$  and  $x_2 \in [0.74, 1.48]$   
 D.  $x_1 \in [-25.7, -23.5]$  and  $x_2 \in [24.06, 24.88]$   
 E. There are no Real solutions.

17. Graph the equation below.

$$f(x) = -(x - 2)^2 + 14$$



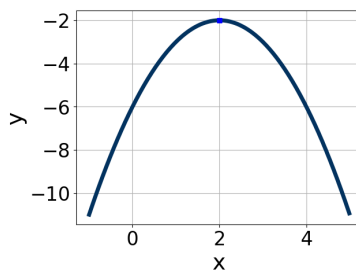
- E. None of the above.

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

$$25x^2 - 15x - 54 = 0$$

- A.  $x_1 \in [-1.23, -0.7]$  and  $x_2 \in [1.34, 2.47]$   
 B.  $x_1 \in [-6.13, -5.67]$  and  $x_2 \in [-0.94, 0.59]$   
 C.  $x_1 \in [-4.54, -2.89]$  and  $x_2 \in [0.49, 0.72]$   
 D.  $x_1 \in [-0.65, 0.03]$  and  $x_2 \in [3.06, 3.65]$   
 E.  $x_1 \in [-30.46, -29.75]$  and  $x_2 \in [44.3, 45.62]$

19. 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.  $a \in [-2.5, -0.5]$ ,  $b \in [-5, -2]$ , and  $c \in [-11, -3]$   
B.  $a \in [-2.5, -0.5]$ ,  $b \in [0, 5]$ , and  $c \in [-11, -3]$   
C.  $a \in [-2.5, -0.5]$ ,  $b \in [-5, -2]$ , and  $c \in [-5, -1]$   
D.  $a \in [0.7, 1.2]$ ,  $b \in [-5, -2]$ , and  $c \in [0, 4]$   
E.  $a \in [0.7, 1.2]$ ,  $b \in [0, 5]$ , and  $c \in [0, 4]$
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20. Factor the quadratic below. Then, choose the intervals that contain the constants in the form  $(ax + b)(cx + d)$ ;  $b \leq d$ .

$$36x^2 - 53x + 10$$

- A.  $a \in [3.82, 5.11]$ ,  $b \in [-9, -4]$ ,  $c \in [6.97, 9.15]$ , and  $d \in [-6, -1]$   
B.  $a \in [11.6, 12.74]$ ,  $b \in [-9, -4]$ ,  $c \in [2.3, 4.02]$ , and  $d \in [-6, -1]$   
C.  $a \in [0.3, 1.11]$ ,  $b \in [-50, -44]$ ,  $c \in [0.41, 1.7]$ , and  $d \in [-14, -5]$   
D.  $a \in [1.28, 3.51]$ ,  $b \in [-9, -4]$ ,  $c \in [17.25, 18.01]$ , and  $d \in [-6, -1]$   
E. None of the above.
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