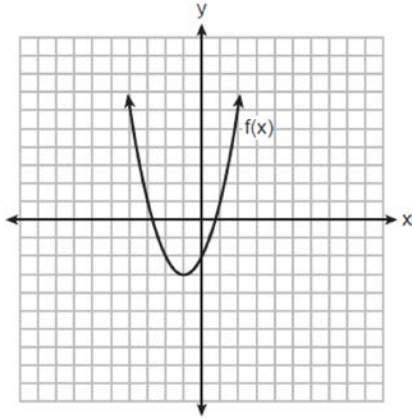


F.IF.C.7: Graphing Quadratic Functions 1

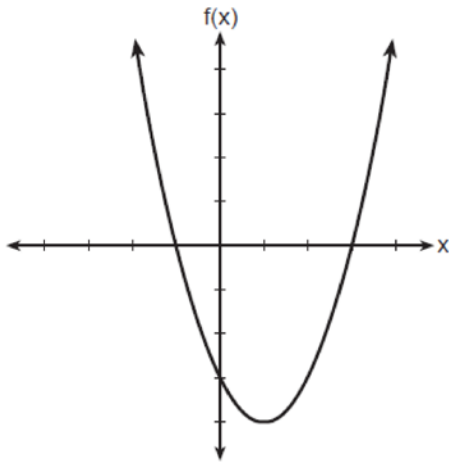
- 1 The function $f(x)$ is graphed on the set of axes below.



What is the equation of the axis of symmetry for $f(x)$?

- 1) $x = -1$
- 2) $x = -3$
- 3) $y = -1$
- 4) $y = -3$

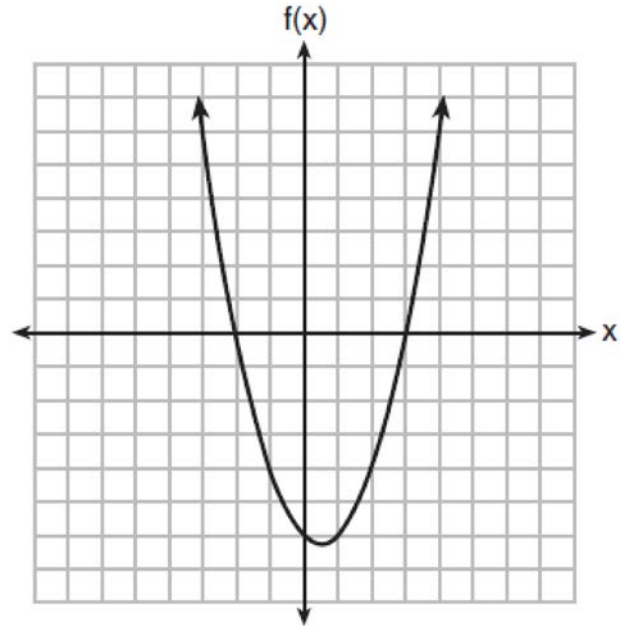
- 2 The function f is graphed on the set of axes below.



What is a possible factorization of this function?

- 1) $f(x) = (x - 1)(x + 3)$
- 2) $f(x) = (x + 1)(x - 3)$
- 3) $f(x) = (x + 1)(x - 4)$
- 4) $f(x) = (x - 1)(x + 4)$

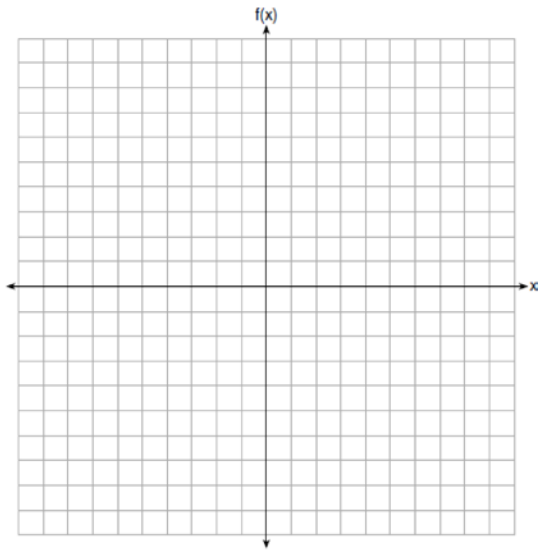
- 3 The graph of the function $f(x) = ax^2 + bx + c$ is given below.



Could the factors of $f(x)$ be $(x + 2)$ and $(x - 3)$?
 Based on the graph, explain why or why *not*.

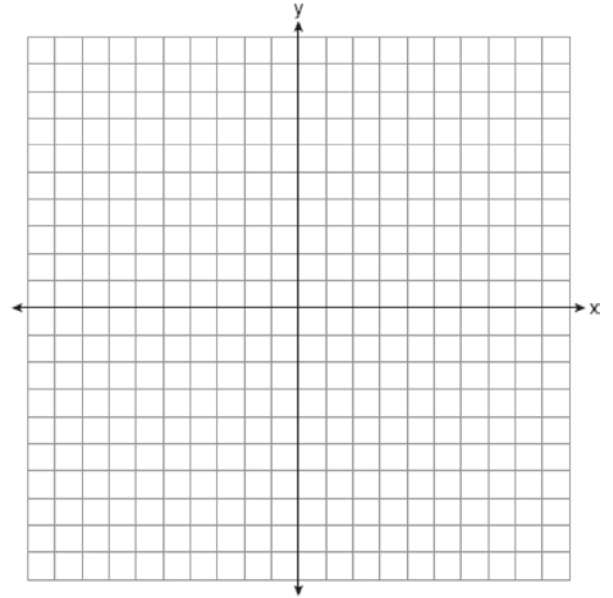
- 4 If the zeros of a quadratic function, F , are -3 and 5 , what is the equation of the axis of symmetry of F ? Justify your answer.

5 Graph the function $f(x) = -x^2 - 6x$ on the set of axes below.



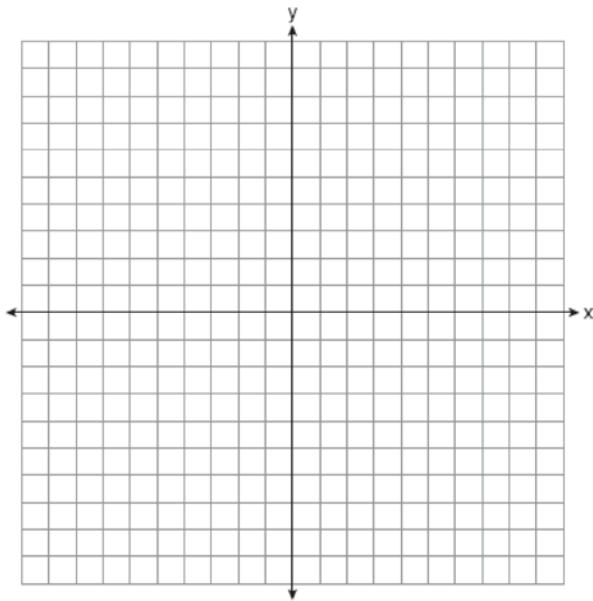
State the coordinates of the vertex of the graph.

7 On the set of axes below, graph $f(x) = x^2 + 4x + 1$.



State the coordinates of the minimum.

6 On the set of axes below, draw the graph of $y = x^2 - 4x - 1$.



State the equation of the axis of symmetry.

F.IF.C.7: Graphing Quadratic Functions 1

Answer Section

1 ANS: 1 REF: 012413ai

2 ANS: 2 REF: 082315ai

3 ANS:

Yes, because from the graph the zeroes of $f(x)$ are -2 and 3 .

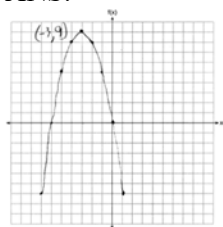
REF: 011832ai

4 ANS:

$$x = 1 \frac{-3+5}{2} = 1$$

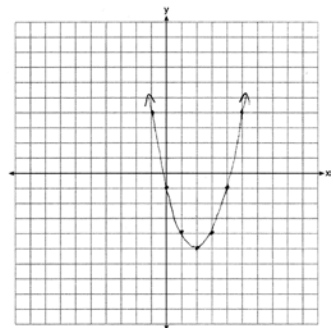
REF: 011829ai

5 ANS:



REF: 061726ai

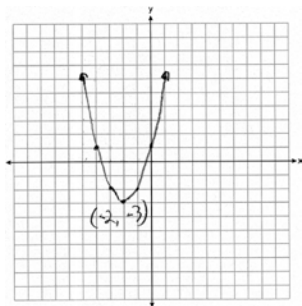
6 ANS:



$$x = \frac{-b}{2a} = \frac{-(-4)}{2(1)} = \frac{4}{2} = 2$$

REF: 061627ai

7 ANS:



REF: 082425ai