

Name: _____

Show work needed to justify your answer.

Date: _____

HW: # 10a: Math IBSL - Standard 10 - Graphing Quadratic Functions

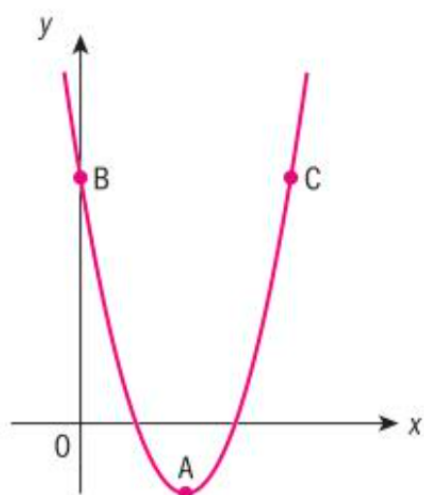
5 points

1. Write the following equations in factored (intercept) form

a $f(x) = x^2 + 7x - 18$

d $f(x) = -4x^2 + 18x - 8$

5 Let $f(x) = (x - 3)^2 - 2$. Part of the graph of $y = f(x)$ is shown.



- a The vertex of the graph of $y = f(x)$ is A.
 - i Write down the coordinates of A.
 - ii Write down the equation of the axis of symmetry for the graph of $y = f(x)$.
- b Find the equation for the function f in the form $f(x) = ax^2 + bx + c$.
- c The coordinates of B are $(0, q)$. Write down the value of q .
- e The coordinates of C are (p, q) . Find the value of p .

- 6** Let $f(x) = x^2 - 2x - 3$ and $g(x) = x - 2$.
- a** Let $h(x) = (f \circ g)(x)$. Show that $h(x) = x^2 - 6x + 5$.
 - b** Find the equation of the axis of symmetry for the graph of h .
 - c** Find the coordinates of the vertex of the graph of h .
 - d** Find an equation for h in the form $h(x) = (x - p)(x - q)$, where p and q are integers.
 - e** Sketch a graph of $y = -h(x)$, for $1 \leq x \leq 5$.