SAT NC Tuesday 10/30

The function f is defined by $f(x) = (x+3)(x+1)$. Factored form

The graph of f in the xy-plane is a parabola. Which of the following intervals contains the x- coordinate of the vertex of the graph of f?

a) $-4 < x < -3$

b) $-3 < x < 1$

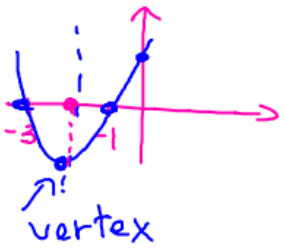
c) $1 < x < 3$

d) $3 < x < 4$

$h = -b/2a$

- zeros: $-3, -1$

2nd method



the x- value of the vertex is the average of the x- intercepts

$\frac{(-3)+(-1)}{2} = -2$

$h = \frac{-4}{2(1)}$

$x^2 + 1x + 3x + 3$

$x^2 + 4x + 3$

$h = \frac{-4}{2}$ $h = -2$