C11 - 3.5 - Vertex:$(-\frac{b}{2a}, y)$ Quadratics in Standard Form Notes

$y = x^2 - 6x + 5$

$Vertex = \left(\frac{-b}{2a}, y\right)$

$Vertex = \left(\frac{-(-6)}{2(1)}, y\right)$

$Vertex = \left(\frac{6}{2}, y\right)$

$Vertex = (3, y)$

$\boxed{Vertex = \left(\frac{-b}{2a}, y\right)}$

$\boxed{\left(\frac{-b}{2a}, c - \frac{b^2}{4a}\right)}$

$y = x^2 - 6x + 5$

$y = (3)^2 - 6(3) + 5$

$y = 9 - 18 + 5$

$y = -4$

Substitute 3 in for x and solve for y

$\boxed{Vertex = (3, -4)}$

$y = x^2 - 6x + 5$

$Vertex = (3, -4)$

Vertex:

x	y
1	0
2	-3
3	-4
4	-3
5	0

$y = x^2 - 6x + 5$

$y = (1)^2 - 6(1) + 5$

$y = 1 - 6 + 5$

$y = 0$

$y = x^2 - 6x + 5$

$y = (2)^2 - 6(2) + 5$

$y = 4 - 12 + 5$

$y = -3$

$y = x^2 - 6x + 5$

$y = (4)^2 - 6(4) + 5$

$y = 16 - 24 + 5$

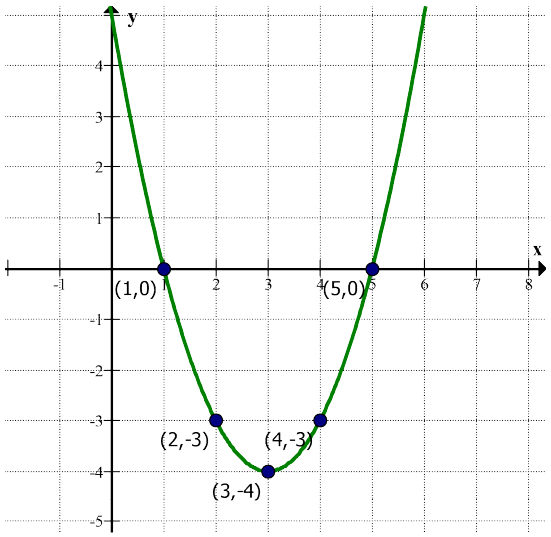
$y = -3$

$y = x^2 - 6x + 5$

$y = (5)^2 - 6(5) + 5$

$y = 25 - 30 + 5$

$y = 0$



AOS: Average Two Horizontal Points $(x - int's)$

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

$x = 3$