November 13, 2015

* Exam #3 - Monday November 30th

Nov 13-9:58 AM

$g(x) = (x-2)^2 + 4$ $h = +2$ $k = 4$

Vertex: (2, 4)

Axis of Symmetry

$(x-2)^2 + 4 = 0$

what x-intercepts? or solutions or "zeros"

$(x-2)^2 + 4 = 0$

$-4 \quad -4$

$\sqrt{(x-2)^2} = \pm\sqrt{-4}$

$x - 2 = \pm 2i$

$x = 2 \pm 2i$

Nov 13-10:06 AM

$f(x) = (x-h)^2 + k$

$a = +1$

Vertex: (h, k)

h: Is the Horizontal position of the Vertex

k: Is the Vertical position of the Vertex

① $(x-5)^2$ $h = +5$

② $(x+7)^2 = (x-(-7))^2$ $h = -7$ $= (x+7)^2$

Nov 13-10:09 AM

$f(x) = (x-2)^2 - 3$ $a = +1$ $h = +2$, $k = -3$

Vertex: $(2, -3)$

$g(x) = (x+4)^2 - 5$

$a = +1$ Vertex: $(-4, -5)$

$h(x) = x^2 + 2$ $k = +2$

Vertex: $(0, 2)$ $h = 0$

$= (x-0)^2$

$= x^2$

Nov 13-10:16 AM

$f(x) = (x-8)^2$ $k = 0$

$a = +1$

Vertex: $(8, 0)$

$f(x) = x^2 = (x-0)^2 + 0$

$a = +1$

Vertex: $(0, 0)$

Nov 13-10:22 AM

$f(x) = a(x-h)^2 + k$

* How the Graph Opens
  - Opens "up" if $a \geq 1$ i.e. positive
  - Opens "Down" if $a \leq -1$ i.e. negative
* Narrow & wide
  - If $a > 1$, then parent gets narrow.
  - If $0 < a < 1$, i.e a fraction, then parent gets wide

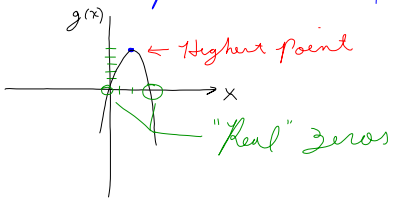
Nov 13-10:23 AM

Nov 13-10:36 AM

$g(x) = -3(x-2)^2 + 5$

Vertex: (2, 5)

Opens: Down & narrow



Nov 13-10:36 AM