

October 4, 2017

Parabolas - Quadratics

#4) $y = -3x^2 + 12x - 10$

Domain: $(-\infty, \infty)$
 Range: $(-\infty, 2]$

$f(x) = \overset{a}{-3}x^2 + \overset{b}{12}x + \overset{c}{-10}$

* Vertex: $(-\frac{b}{2a}, f(-\frac{b}{2a}))$

$= (-\frac{12}{2(-3)}, \dots)$
 $= (-\frac{12}{-6}, \dots)$
 $= (2, f(2))$

$f(2) = -3(2)^2 + 12(2) - 10 = (2, 2)$
 $= -3(4) + 24 - 10$
 $= -12 + 24 - 10$
 $= 12 - 10$
 $= 2$

Oct 4-8:03 AM

Oct 4-8:16 AM

Domain: $(-\infty, \infty)$
 Range: $[-2, 8]$

Oct 4-8:22 AM