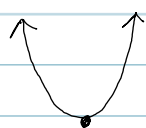Chapter 2

Nonlinear Functions & Models

Section 2.1

Parabolas (Quadratic Functions)

Vertex (h, k)

1. Standard form

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

$$vertex = (h, k)$$
"readable"
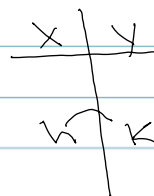
2. general form

$$y = ax^2 + bx + c$$

(x) $h = \dfrac{-b}{2a}$

(y) $k =$ plug in h

x	y
h	k

a — sign
　　 size

$a > 0$ (+) open up → $\cup$ min

$a < 0$ (−) open down → $\cap$ max