

## I. Quadratic Functions:

1.  $f(x) = ax^2 + bx + c$       General form

vertex @  $(h, k)$  where  $h = -\frac{b}{2a}$

and  $k = f(h)$

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

vertex @  $(h, k)$

3. axis of symmetry is the vertical line,  $x = h$

$a > 0 \Rightarrow$  parabola opens upward

minimum  $y$ -value is  $f(h)$ , no max

$a < 0 \Rightarrow$  parabola opens downward

maximum  $y$ -value is  $f(h)$ , no min

II. Examples (pp.196-197):

Exercises #6,16,18,26,28,36,42

HW: pp.196-197 / Exercises #3-33(odd),37,41,43