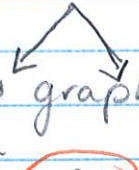


#3 Transformations of Functions


10/6/15

← → () abiding

$$\text{Absolute Value: } y = a|x-h| + k$$

- * a is negative the graph flips over
- * farther a is from zero the more narrow graph 
- * $x-h$ moves graph right, $x+h$ moves graph left
- * adding k moves graph up, subtracting k moves down

$$\text{Quadratic Functions: } y = a(x-h)^2 + k$$

- * a is negative flips parabola 
- * farther a is from zero move narrow the graph closer a is to zero the wider the graph
- * $x-h$ moves graph right, $x+h$ moves graph left
- * $+k$ moves up, $-k$ moves down

$$\text{Exponential Functions: } y = a b^{x-h} + k$$

- * $-a$ flips vertically

- * $b > 1$ growth

- * $0 < b < 1$
 b is between 0 and 1

- * $x-h$ moves right
 $x+h$ moves left

- * $+k$ moves up
 $-k$ moves down