

## Section/Lesson Title: GRAPH TRANSFORMATIONS

Materials: WS

HW#

25 WS

Reflections:

NO GRAPING  
CALCULATOR  
ON THE TEST ☺

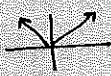
GRAPH TRANSFORMATIONS

## 1. RULES

$$\textcircled{1} y = a|x+h|+k$$


$\uparrow$                        $\uparrow$                        $\uparrow$   
 VERTICAL             HORIZONTAL             VERTICAL  
 STRETCH             SHIFT                     SHIFT  
 (OPPOSITE DIRECTION)

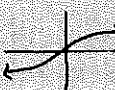
## ② PARENT GRAPHS

$y = |x|$ 


$y = x^2$ 


$y = \sqrt{x}$ 


$y = x^3$ 


$y = \sqrt[3]{x}$ 


## 3. SKETCH GRAPHS

$y = |x-3|$

$y = |x| - 2$

$y = 3|x|$

$y = -2|x+2| + 3$

$y = \sqrt{x+2} - 1$

$y = (x+2)^2 - 1$

$y = 2\sqrt{x-3}$

$y = -\sqrt[3]{x} + 3$

$y = 2(x+1)^2 - 4$