Name: _____ Hour: _____ Date: _____

Writing Equations of Transformed Functions Notes

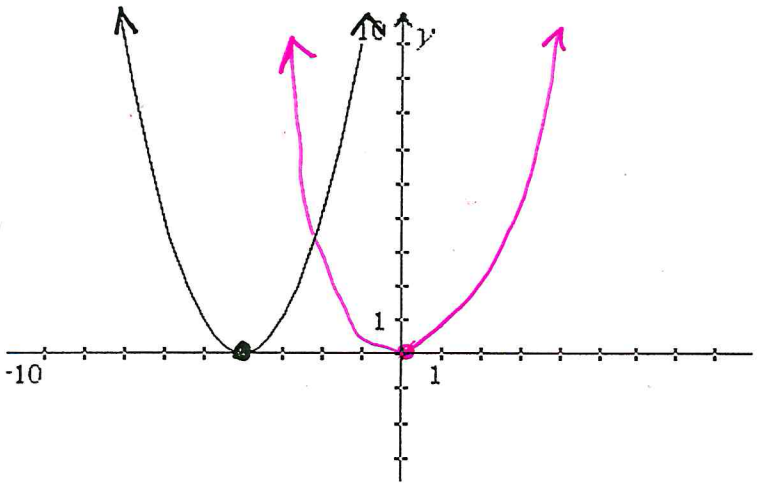
When writing the equation from the graph of a transformed function, follow these three steps:

1) Determine Function Family / Sketch Parent Functio

2) Identify Transformations

3) Write Transformed Equation

Examples:



1) Quadratic $y = x^2$

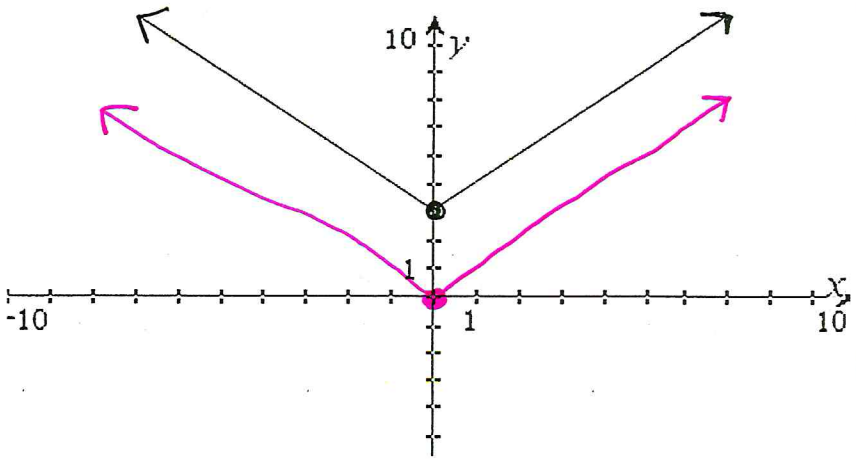
2) Left 4 (inside)

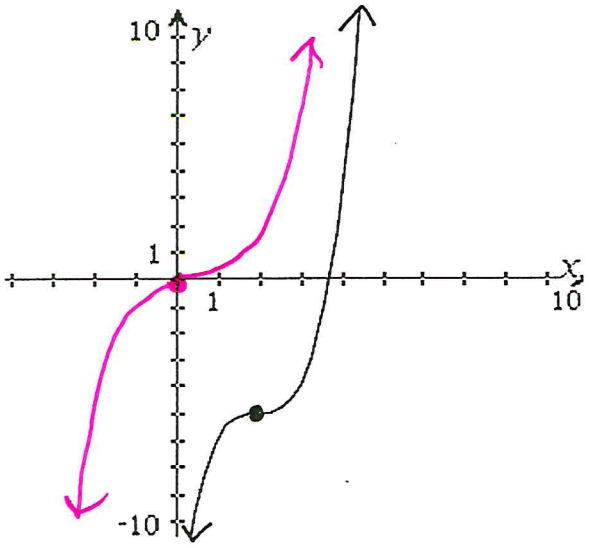
3) $y = (x+4)^2$

1) Absolute Value $y = |x|$

2) Up 3 (outside)

3) $y = |x| + 3$





1) Cubic $y = x^3$

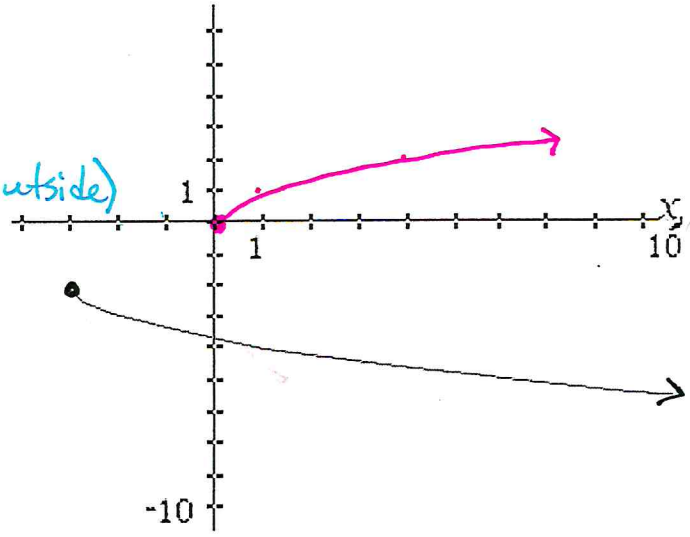
2) Right 2 (inside)
Down 5 (outside)

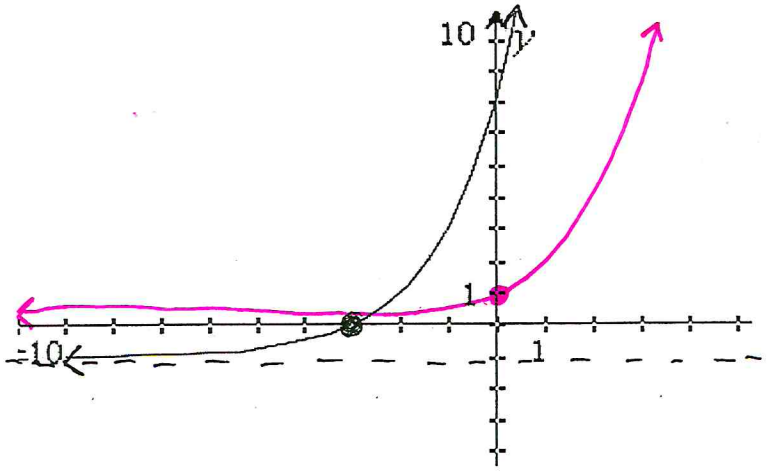
3) $y = (x-2)^3 - 5$

1) square root $y = \sqrt{x}$

2) Reflect over x-axis (negative outside)
Left 3 (inside)
Down 2 (outside)

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





1) exp. growth $y = 2^x$

2) Left 3 (inside)
Down 1 (outside)

3) $y = 2^{x+3} - 1$