

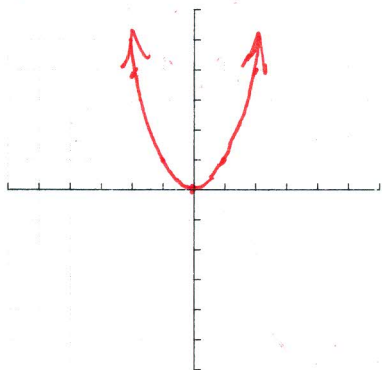
The Great Quadratic
Transformations & Characteristics
of Quadratic Functions

Name _____

Date ___/___/___ Day ___ Block ___

Graph the quadratic parent function using an x/y table.

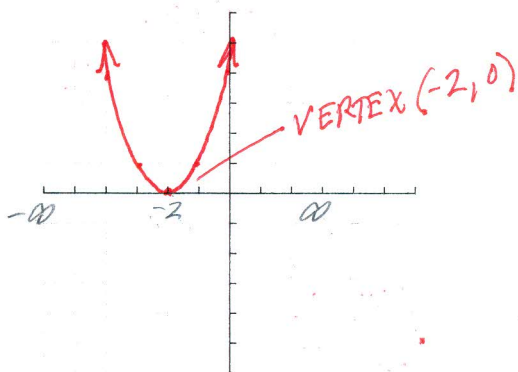
1. $y = x^2$



x	y
-2	4
-1	1
0	0
1	1
2	4

Graph each transformation precisely! Identify the characteristics.

2. $y = (x + 2)^2$ left 2



domain: $(-\infty, \infty)$

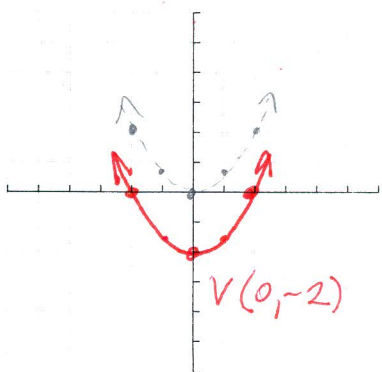
range: $[0, \infty)$ $y \geq 0$

interval of increase: $(-2, \infty)$

interval of decrease: $(-\infty, -2)$

~~maximum~~ minimum? value? 0

3. $y = \frac{1}{2}x^2 - 2$ shrink/down 2



domain: $(-\infty, \infty)$

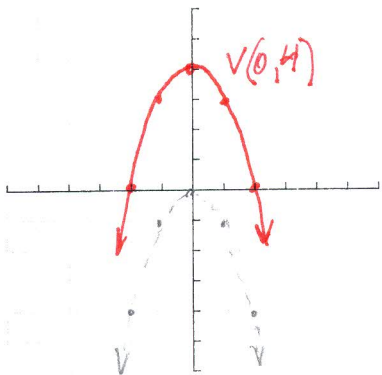
range: $[-2, \infty)$

interval of increase: $(0, \infty)$

interval of decrease: $(-\infty, 0)$

maximum or minimum? value? -2

4. $y = -x^2 + 4$ reflection/up 4



domain: $(-\infty, \infty)$

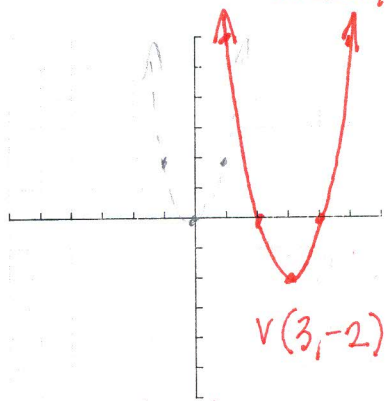
range: $(-\infty, 4]$

interval of increase: $(-\infty, 0)$

interval of decrease: $(0, \infty)$

maximum or minimum? value? 4

5. $y = 2(x - 3)^2 - 2$ stretch/right 3/down 2



domain: $(-\infty, \infty)$

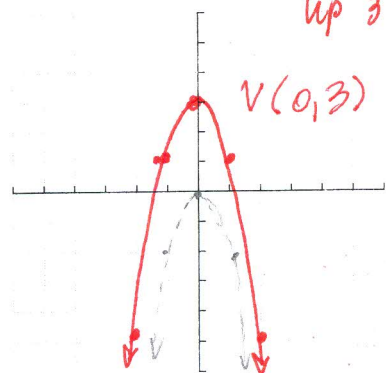
range: $[-2, \infty)$

interval of increase: $(3, \infty)$

interval of decrease: $(-\infty, 3)$

minimum or maximum? value? -2

6. $y = -2x^2 + 3$ reflection/stretch/
up 3



domain: $(-\infty, \infty)$

range: $(-\infty, 3]$

interval of increase: $(-\infty, 0)$

interval of decrease: $(0, \infty)$

maximum or minimum? value? 3