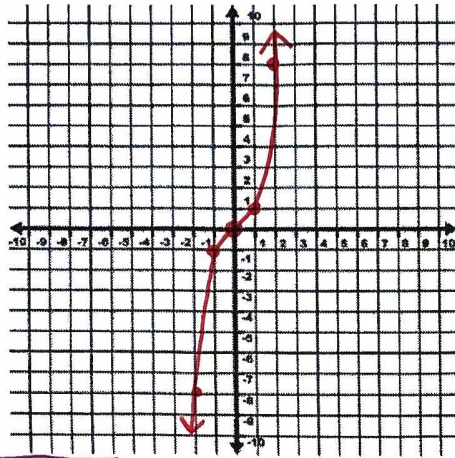


AA PREP: GRAPHING CUBIC FUNCTIONS WITH TRANSFORMATIONS LECTURE

Graph the cubic parent function. Then, graph each of the following cubic functions using transformations. State domain and range.

1. $y = x^3$

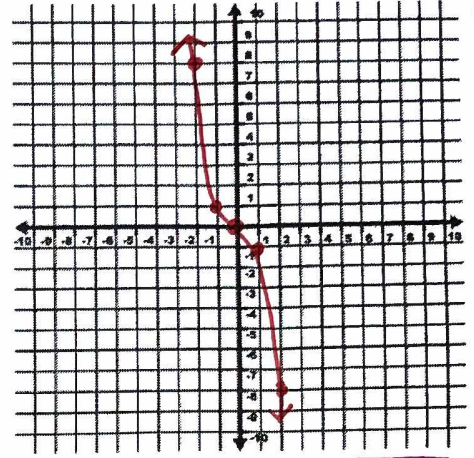
x	y
-2	-8
-1	-1
0	0
1	1
2	8



Domain: \mathbb{R} $(-\infty, \infty)$ Range: \mathbb{R} $(-\infty, \infty)$

2. $f(x) = -x^3$

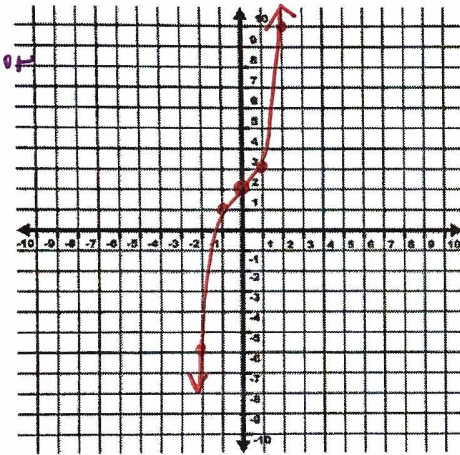
REFLECT
OVER
X-AXIS



Domain: \mathbb{R} $(-\infty, \infty)$ Range: \mathbb{R} $(-\infty, \infty)$

3. $y = x^3 + 2$

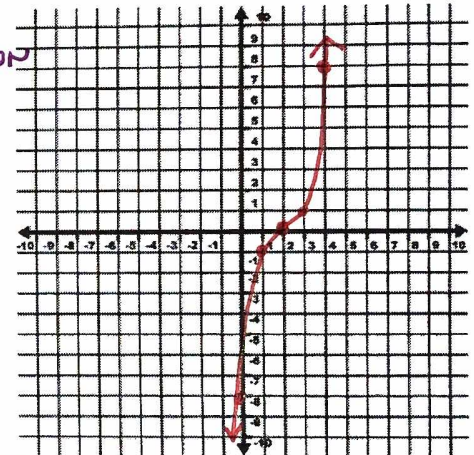
V TRANSLATION
2 (↑)



Domain: \mathbb{R} $(-\infty, \infty)$ Range: \mathbb{R} $(-\infty, \infty)$

4. $g(x) = (x-2)^3$

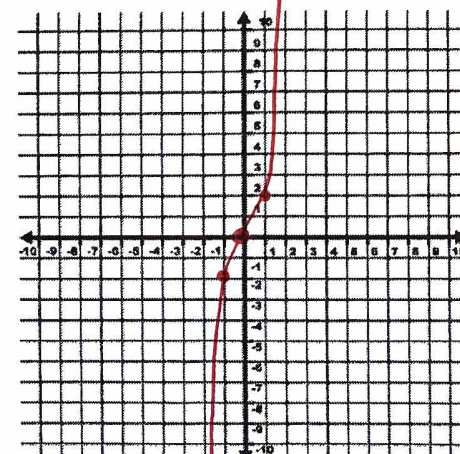
H TRANSLATION
2 (R)



Domain: \mathbb{R} $(-\infty, \infty)$ Range: \mathbb{R} $(-\infty, \infty)$

5. $g(x) = 2x^3$

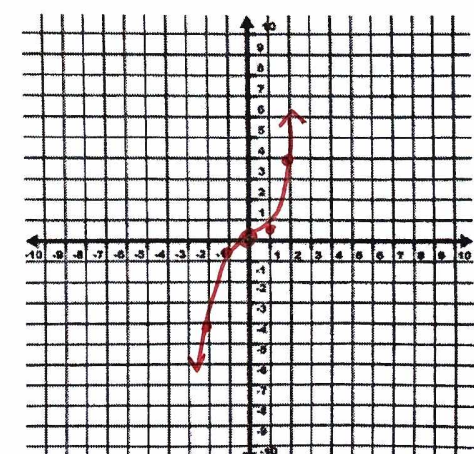
V STRETCH
x2
(y-VALUES)
x2



Domain: \mathbb{R} $(-\infty, \infty)$ Range: \mathbb{R} $(-\infty, \infty)$

6. $y = \frac{1}{2}x^3$

V COMP.
x 1/2
(y-VALUES)
x 1/2



Domain: \mathbb{R} $(-\infty, \infty)$ Range: \mathbb{R} $(-\infty, \infty)$