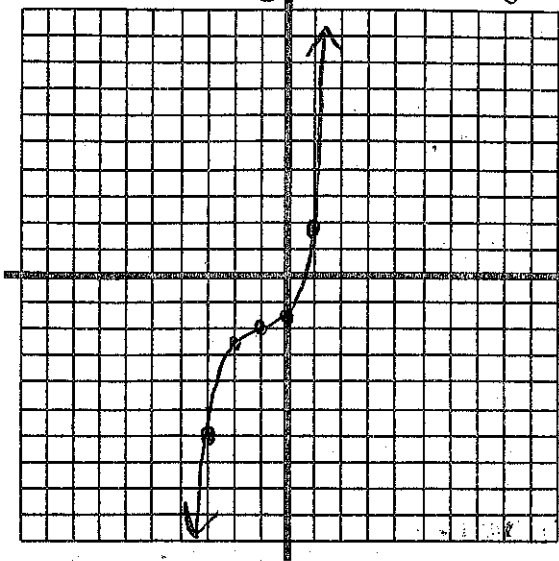


Describe the transformations of the following functions and sketch the final graph.

1. $g(x) = \frac{1}{2}(x+1)^3 - 2$ cubic

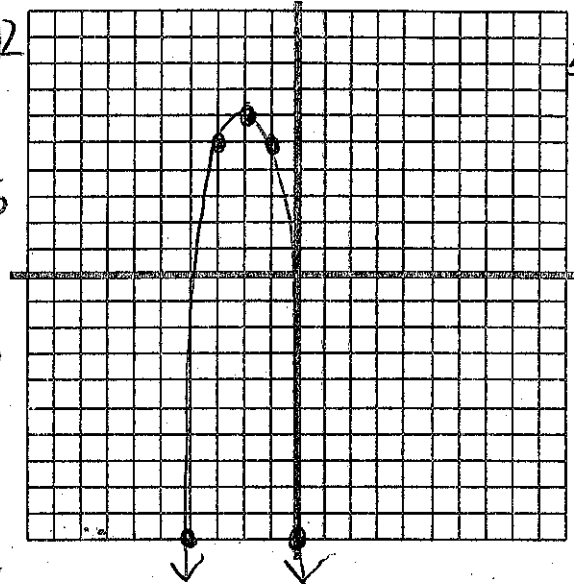
- shift left 1 (x)
- vertical shrink of $\frac{1}{2}$ (y)
- shift down 2 (y)



x	$\frac{1}{2}y - 2$
-3	-6
-2	-2.5
-1	-2
0	-1.5
1	2

2. $g(x) = -(x+2)^4 + 6$ quartic

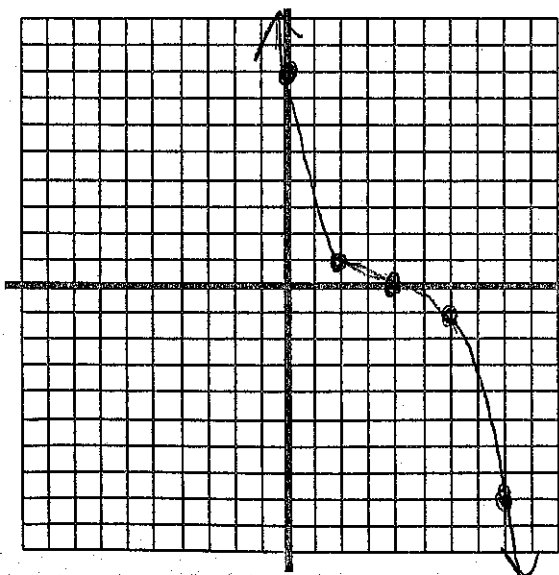
- shift left 2 (x)
- reflect over x-axis (y)
- shift up 6 (y)



x-2	$-y+6$
-4	-10
-3	5
-2	6
-1	5
0	-10

3. $g(x) = -\left(\frac{1}{2}x - 2\right)^3 = -\left(\frac{1}{2}(x-4)\right)^3$ cubic

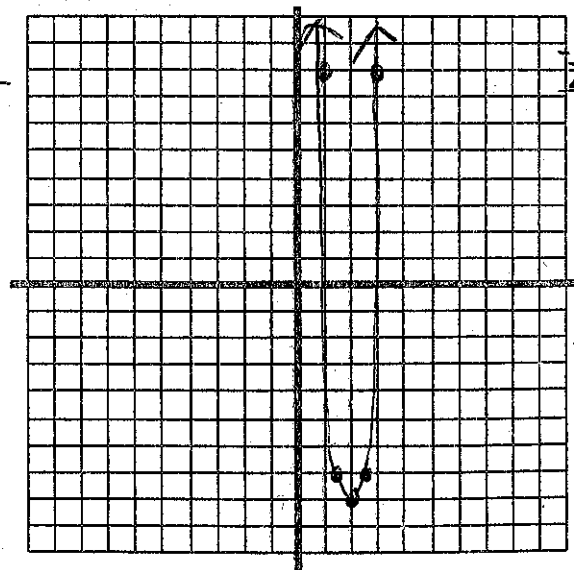
- shift right 4 (x)
- horizontal stretch of 2 (x)
- reflect over x-axis (y)



$2x+4$	$-y$
0	8
2	1
4	0
6	-1
8	-8

4. $g(x) = (4-2x)^4 - 8 = (-2(x-2))^4 - 8$ quartic

- shift right 2 (x)
- reflect over y-axis (x)
- horizontal compression of $\frac{1}{2}$ (x)
- shift down 8 (y)



$\frac{1}{2}x+2$	$y-8$
1	0
1.5	-7
2	-8
2.5	-7
3	0