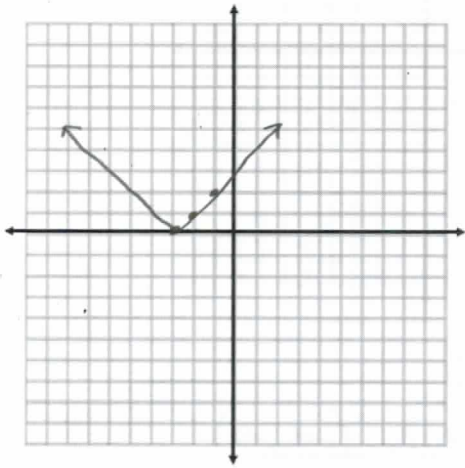


Describe the transformations and graph each function. List the domain and range of each function.

1. $g(x) = |x+3|$, Parent Function $f(x) = |x|$

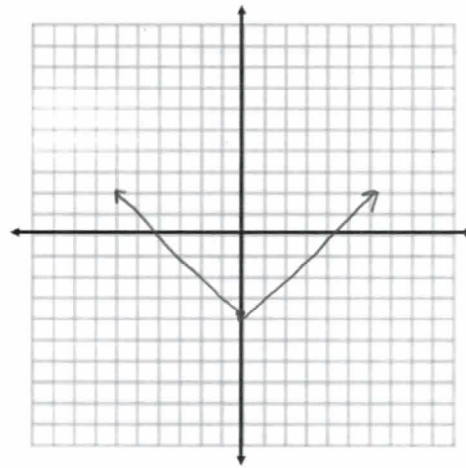


Shift: left 3

Domain: all reals $(-\infty, \infty)$

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

2. $g(x) = |x| - 4$, Parent Function $f(x) = |x|$

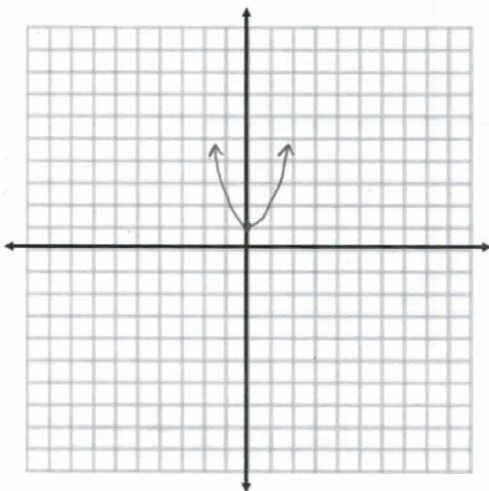


Shift: down 4

Domain: all reals $(-\infty, \infty)$

Range: $y \geq -4$ $[-4, \infty)$

3. $g(x) = x^2 + 1$, Parent Function $f(x) = x^2$

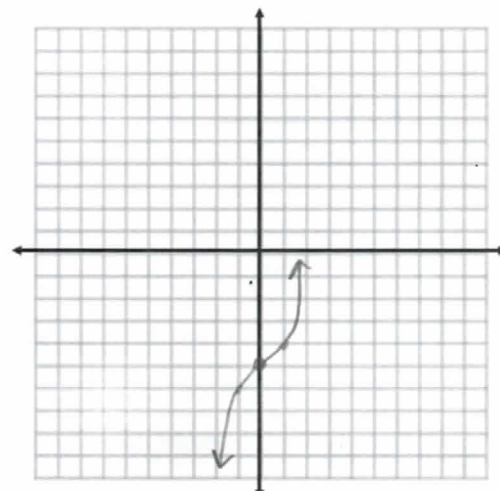


Shift: up 1

Domain: $(-\infty, \infty)$ all reals

Range: $y \geq 1$ $[1, \infty)$

4. $h(x) = x^3 - 5$, Parent Function $f(x) = x^3$

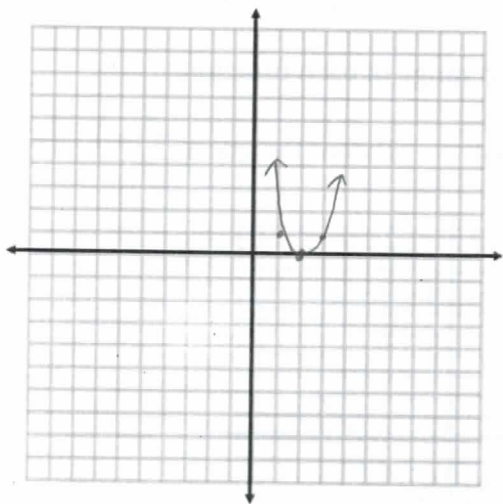


Shift: down 5

Domain: all real #'s $(-\infty, \infty)$

Range: all real #'s $(-\infty, \infty)$

5. $h(x) = (x-2)^2$ Parent Function $f(x) = x^2$

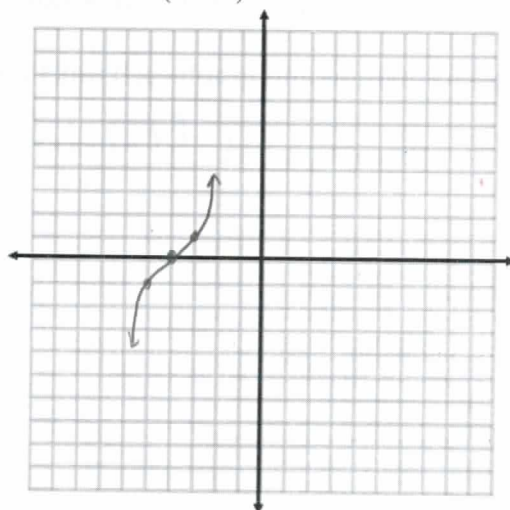


Shift: right 2

Domain: all reals $(-\infty, \infty)$

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

6. $h(x) = (x+4)^3$ Parent Function $f(x) = x^3$

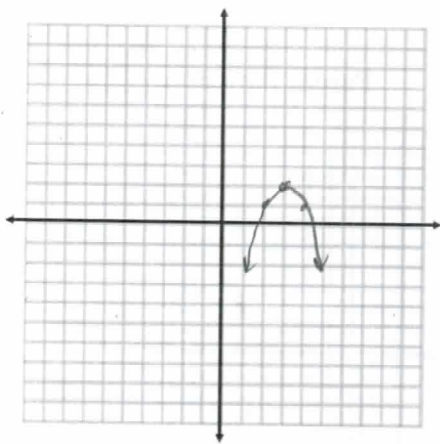


Shift: left 4

Domain: all reals $(-\infty, \infty)$

Range: all reals $(-\infty, \infty)$

7. $k(x) = -(x-3)^2 + 2$ Parent Function $f(x) = x^2$

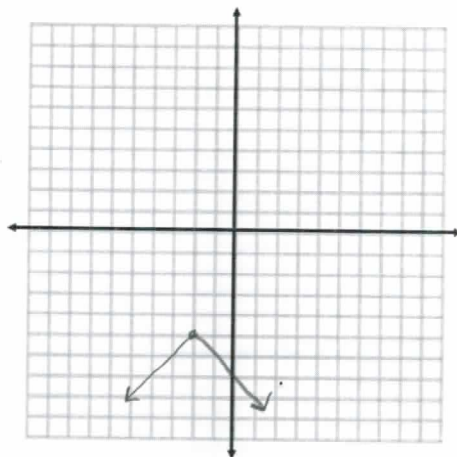


Shift: up 2, right 3, reflect over x

Domain: all reals $(-\infty, \infty)$

Range: $y \leq 2$ $(-\infty, 2]$

8. $k(x) = -|x+2| - 5$ Parent Function $f(x) = |x|$



Shift: down 5, left 2, reflect over x

Domain: all reals $(-\infty, \infty)$

Range: $y \leq -5$ $(-\infty, -5]$