Name:	Sec.#	ST.ID

1) Determine whether the graph of equation is symmetric with respect to x-axis, y-axis or the origin:

a) $\left| x - y \right| + \left| y \right| = -x^2$

b) $x^2 - y^2 = 4$

2) Determine whether the function is odd, even or neither:

a) $f(x) = \dfrac{x^3}{x^2 + 1}$

b) $f(x) = \left| x - 2 \right| - 1$

3) Use the graph of the given function $f(x) = (x+1)^3 - 1$ to sketch the graph of:

a) $f(-x)$

b) $-f(x-3) + 2$

c) $f(\dfrac{1}{2}x)$

4) If the graph of $f(x) = -\dfrac{2}{x^2 + 1}$ is shifted 2 units upward & 1 unit to the left, then find the equation of the new graph.

5) Given the functions: $f(x) = \sqrt{1-x^2}$, $g(x) = x$, $h(x) = x^2 - 3$ & $p(x) = \dfrac{2x}{x+5}$, Then find:

a. The domain of $\left(\dfrac{f}{g}\right)(x)$

b. $(g \times h)(-1)$

c. The domain of $(h \circ f)(x)$

d. The difference quotient $\dfrac{f(x+h) - f(x)}{h}$ of $h(x)$

e. $(p \circ p)(-2)$