Practice #3- Transformations   Name:

1. For each of the following equations:
    1. State the name of parent equation.
    2. **Sketch each equation** (Two per Grid, label them).
    3. **State its domain and range**

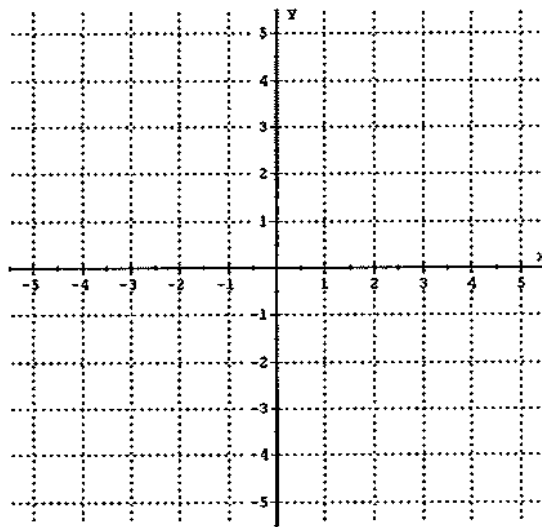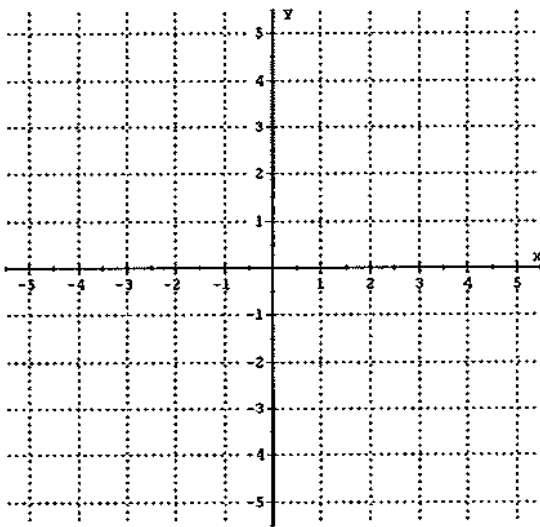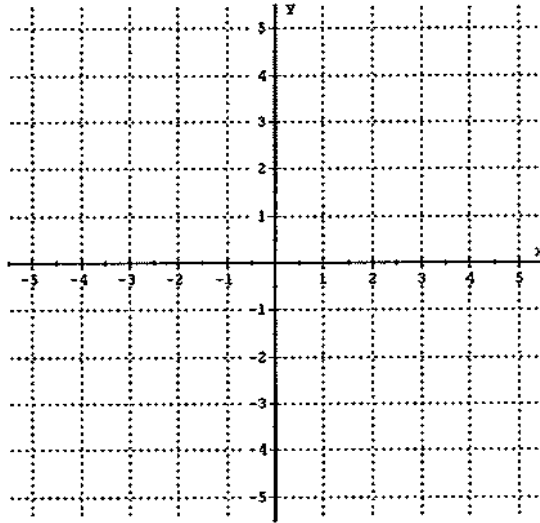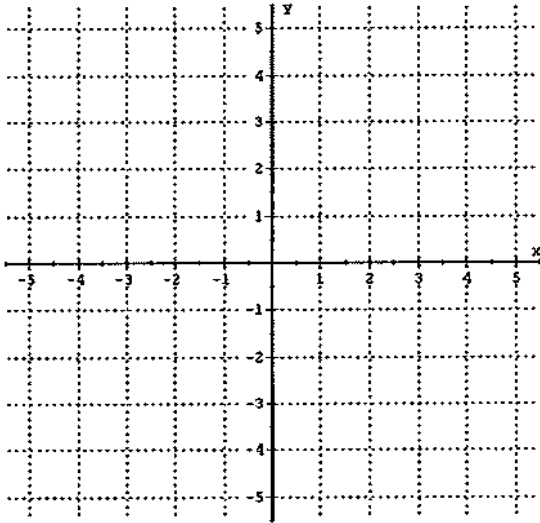a) $y = -2(x + 4)^3 - 1$

b) $y = -\dfrac{1}{x}$

c) $x = 2(y-1)^2 - 3$

d) $g(x) = -2\sqrt{3-x} + 4$

e) $y = 3x^3 - 5$

f) $(x-3)^2 + (y+1)^2 = 4$

g) $y = \dfrac{1}{3}\sqrt{x-3} + 2$

h) $f(x) = 2|x-3| + 4$

2.

The graph shows the function $f(x)$, for $-2 \le x \le 4$.

a Let $h(x) = f(-x)$. Sketch the graph of $h(x)$.

b Let $g(x) = \dfrac{1}{2} f(x-1)$. The point $A(3, 2)$ on the graph of f is transformed to the point P on the graph of g. Find the coordinates of P.