Pre-Cal CW 1.4-1.6

a) For each problem, describe the transformation(s) that is/are taking place.

b) Determine what happens to the point $(-6,5)$ after the transformation(s)

1. $g(x) = f(x+2) - 4$

2. $g(x) = f\left(-\frac{1}{2}x\right)$

3. $g(x) = -2f(x-1) + 5$

Given: $f(x) = x+3; \quad g(x) = 3x^2 - x; \quad h(x) = 3x$

4. $(g \circ f)(x) =$

5. $(f \circ g)(-2) =$

6. $(h - g)(-1) =$

7. $\left(\frac{f}{h}\right)(-6) =$

8. A function and its inverse have symmetry with respect to the line : _____

9. Find $f^{-1}(x)$ given $f(x) = 2x^3 - 1$

10. Determine algebraically whether or not $f(x) = 2x+1$ *and* $g(x) = \frac{1}{2}x - 1$ are inverses of one another.