Name _____ Period_____ Date _____

Ms. Schmidt   Pre-Calculus

Weekly Homework Quiz 5

This is a weekly homework quiz that will be given every week and is due back the following Monday.

This quiz is due back: **October 30th , 2017**

To receive full credit, all work must be shown. Any correct answer without work shown will receive only 1 point. Each question is worth 4 points.

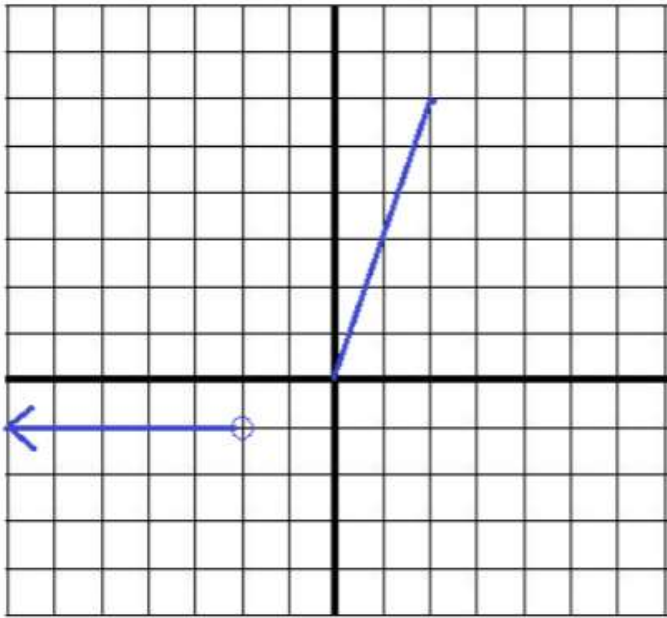1) Expand the binomial: $(2x^2 - 4y)^4$

2)

    a) Find the inverse of $f(x) = 3x^2 + 1$.

    b) Verify the inverse in #4 by finding $\left(f \circ f^{-1}\right)(x) = x$ and $(f^{-1} \circ f)(x)$.

3) Write the equation: $4x^2 + 4x + 8y + 12 = 0$ in the form $(x - h)^2 = 4p(y - h)$ and state the vertex.

4) Find the domain and range for the following.

5) Sketch the polynomial by finding the end behavior, multiplicity and the zeros.
$$f(x) = -x^3 + x^2 + 6x$$