Name _____ Period_____ Date _____
Ms. Schmidt   Pre-Calculus

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

This quiz is due back: **November 20th, 2017**

To receive full credit, all work must be shown. Any correct answer without work shown will receive only 1 point.

1) Solve and graph the inequality. Write your answer in interval notation.
$$7x^2 \geq 4(1 + 3x)$$

2) For the polynomial $f(x) = (x^3 - 4x)(x^2 + 3x - 10)$ write the factorization and find the zeros of the function. Then state the end behavior and sketch it.

3) Find all the intervals of length 1 in which the polynomial function is guaranteed to have a zero. Show your table of values. $f(x) = x^3 + x - 1$

4) Write the polynomial function in standard form given the roots of: $\{0, 0, -3, 2 \pm \sqrt{10}\}$

5) List all the possible zeros for the function $f(x) = x^3 - 13x^2 + 23x - 11$. Then find all the rational zeros.