PreCalculus B Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hr\_\_\_\_\_

Review 2.2-2.4 Polynomials of Higher Degree

Determine whether the following are polynomial functions and if they are, state the degree.

1. (x – 2)(x +7)
2. x2 + 2.3x – 5
3. x1/3 + 2x
4. 1/x + 5x
5. x(x-3)3(x+2)

Find all the real zeros and state their multiplicities.

1. x(x-3)3(x+2)
2. 4(x-5)4(x+16)2
3. 5x2(3-x)(x+2)7
4. x2 + 7x – 8

Find a polynomial of minimum degree that has the given zeros. (Put #10 in Standard Form)

1. 3, 5, -2
2. 0, 7, 4, -3
3. -2(multiplicity 3), 4 (multiplicity 2)
4. 0 (multiplicity 4), 6 (multiplicity 3)

For each polynomial (a) list each real zero and its multiplicity (b) determine whether the graph touches or crosses at each x-intercept (c) find the y-intercept (d) sketch the graph.

1. f(x) = -(x + 3)2
2. 2x5 - 6x4 - 8x3
3. x2(x – 2)3(x + 3)2