

Homework 10

Name:

Date: June 12, 2013

P 1. Rewrite

$$x^6 - \frac{11x^5}{14} + \frac{13x^4}{14} - \frac{11x^3}{7} - \frac{71x^2}{7} + \frac{44x}{7} + \frac{60}{7}$$

in factored form. [Hint: $x = \sqrt{2}, -5/7, 2i$ are all roots (i.e. zeros) of f]

P 2. Graph

$$g(x) = x^6 - 14x^5 + 80x^4 - 238x^3 + 387x^2 - 324x + 108.$$

Determine the end-behavior of g . Find and label the y -intercept. Find all the zeros of g and state their multiplicities. Label the x -intercepts. Include a table of “nice” values for which to evaluate g and the corresponding values of g . [Hint: $x = 3$ is a triple root and $x = 1$ is a simple root.]