

Polynomial Functions Test Review

- a) $\frac{3}{2}, -4$ b) $\frac{-2 \pm \sqrt{19}}{3}$ c) $\frac{5 \pm \sqrt{17}}{4}$
- a) -31; 2 imaginary b) 0; 1 double rational root c) 16; 2 rational, real rational
- sum = 4, product = $\frac{4}{5}$,
- $x^2 - 6x + 10 = 0$
- $(-2, 0) \cup (1, \infty)$
- $(-\infty, 5)$
- $f(3) = 89$
- 3 is not a zero because the remainder is -66
- $k = 1$
- $f(x) = -\frac{3}{2}(x^2 + 1)(x - 1)(x + 2)$
- 1 multiplicity of 3, -2 multiplicity of 4
- $k = -14$
- On Calculator 1.6
- a) Poss. +: 2 or 0 Poss. (-): 1 Poss. i : 2 or 0 b) $-1, \frac{2 \pm \sqrt{10}}{3}$
- $f(x) = (x - 3)(x + 1)(2x + 1)$
- $4 - i$
- $(x + 3)^2(x + 2)(x - 1)$
- $f(x) = x^4 - 4x^3 + 9x^2 - 16x + 20$
- $-2, -\frac{2}{3}, -1 \pm \sqrt{3} - 2,$
- 1.8