**Polynomial and Rational Functions**

Chapter 5 Notes and Assignments

Math 1050

* **5.4** Polynomial and Rational Inequalities

Pg. 372; #’s 6, 7, 21-42 by 3, 43-45, 481

* **5.5** The Real Zero of a Polynomial Function

Pg. 385; #’s 15-75 by 5

* **5.6** Complex Zeros / Fundamental Theorem of Algebra

Pg. 392; #’s 9, 12, 15, 17, 19, 22, 23, 26, 30, 31, 35, 36, 38, 40

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**Objectives**: Solve each inequality; Use the remainder and factor theorems to answer questions about remainders and factors.; Find the maximum number of real zeros; List the possible rational zeros; Find all real zeros. Use the real zeros to factor; Solve each equation in the real number system; Given complex zeros of a polynomial with real coefficients, be able to find the remaining zeros; Find a polynomial with real coefficients having the given degree and zeros; Find a polynomial with real coefficients having the given degree and zeros; Use the given zero to find the remaining zeros; Use the given zero to find the remaining zeros; Find the complex zeros of each polynomial function.

**Composite Functions**

Chapter 6 Notes and Assignments

Math 1050

* **6.1** Composite Functions

Pg. 338; #’s 15-63 (by 3’s), 65-90 (by 5’s)

* **6.2** One-to-One; Inverse Functions

Pg. 350; #’s 15, 20, 25, 27, 30, 32, 36, 43, 48, 50, 54

* **6.3** Exponential Function

Pg. 365; #’s (10-40) (by 5’s), 49, 51

* **6.4** Logarithmic Functions

Pg. 446; #’s 15-25 by 5, 27, 35-55 by 5, 63-78 by3, 86, 95, 103

* **6.5** Properties of Logarithms

Pg. 457; #’s 15-99 by 3’s

* **6.6** Logarithmic and Exponential Equations

Pg. 463; #’s 5-100 by 5’s

* **6.7** Financial Models

Pg. 472; #’s 10-70 by 5’s

* **6.8** Exponential Growth and Decay

Pg. 484; #’s 3-24 by 3’s

* Chapter 5.4-Chaptert 6 Test

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**Objectives**: Determine whether the function is one-to-one; Verify that f and g are inverses; Graph the inverse function f(x); Find the inverse function; Approximate using a calculator; From a table determine whether linear, exponential, neither; Use transformations to graph; Solve the exponential equation; Change exponential to log, log to exponential; find the exact value of the logarithm; Find the domain of the log function; Use a calculator to evaluate ; Use transformations to graph ln, log; Find the inverse function, with log or exponential; Solve the equation (logs/exponents); Find the exact value of the logarithm; Write as a sum or difference of logarithms; Write as a single logarithm; Use a calculator to evaluate; Solve the logarithm equation; Solve the exponential equation; Solve financial models