

## Math 165/166 College algebra(for Business)

List of topics covered:

### Chapter 1: The foundations of Algebra

Basic rules of algebra

### Chapter 2

(Sec 2.1) Linear equations; solve for one variable

(Sec 2.2) Applications of linear equations; rate, mixture

(Sec 2.3) The quadratic equations; factoring, quadratic formula, completing the square

(Sec 2.4) Applications of quadratic equations

(Sec 2.5) Linear and quadratic inequalities; critical values

(sec 2.6) Absolute value equation and inequalities

### Chapter 3

(Sec 3.1) Rectangular coordinate system

(Sec 3.2) Functions and function notations; difference quotient

(Sec 3.3) Graphs of functions; symmetries

(Sec 3.4) Linear functions; slope; vertical lines, horizontal lines

(Sec 3.5) The algebra of functions; Inverse functions

### Chapter 4

(Sec 4.1) Quadratic functions; parabola, vertex, line of symmetry, applications

(Sec 4.3) long division, synthetic division, two forms

(Sec 4.4) Remainder theorem, factor theorem

### Chapter 6

(Sec 6.1) Review of inverse function

(Sec 6.2) Exponential functions; graph, table, formula

(Sec 6.3) Logarithmic functions & properties, applications

(Sec 6.4) Fundamental properties of log, applications

(Sec 6.5) Exponential and log equations, applications

(Sec 7.1& 7.2) System of equations & applications

## How to prepare well for the final!

1. Review all previous exams carefully.
  2. Do each problem in the review for final thoroughly.
  3. Make a sample final for yourself and try it.
  4. Start preparing for the final as soon as possible!
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- Please remember that your bad final score can drop your overall grade significantly. The final exam score is 20% of your final grade.
  - Small extra credit can be earned by completing the course evaluation. Please send me the certificate by email for proof.
  - There is no other opportunity for extra credit to improve your grade. Please prepare well for the final!!