MATH 1301 – COLLEGE ALGEBRA

1.1 READING ASSIGNMENT
READ the first 9 pages of our textbook by clicking on the link below. Pay close attention to the sets of real numbers and the applications on the last few pages.
Numbers, Data, and Problem Solving

1.2 READING ASSIGNMENT
READ pp. 12-15, 18-top 19 by clicking on the follow link
Visualizing and Graphing Data

1.3 READING ASSIGNMENT
READ pp. 28-35 and pp. 38-41 by clicking on the following link
Functions and Their Representations

1.4 READING ASSIGNMENT
READ pp. 45-51 by clicking on the following link
Types of Functions

1.5 READING ASSIGNMENT
READ pp. 56-61 by clicking on the following link
Increasing and Decreasing Functions

2.1 READING ASSIGNMENT
READ pp. 77-83 by clicking on the following link
Linear Functions and Their Models.

2.2 READING ASSIGNMENT
READ pp. 96-106 by clicking on the following link
Equations of Lines

2.3 READING ASSIGNMENT
READ pp. 113-121 by clicking on the following link
Linear Equations

2.4 READING ASSIGNMENT
READ pp. 132-140 by clicking on the following link
Section 2.4 - Solving Inequalities

2.5 READING ASSIGNMENT
READ pp. 146-153 by clicking on the following link
Section 2.5 - Solving Absolute Value Equations and Inequalities

3.1 READING ASSIGNMENT

READ pp. 170-180 by clicking on the following link

Quadratic Functions and Models

3.2 READING ASSIGNMENT

READ pp. 188-199 by clicking on the following link

Solving Quadratic Equations

3.3 READING ASSIGNMENT

READ pp. 205-209 by clicking on the following link

Complex Numbers

3.4 READING ASSIGNMENT

READ pp. 212-217 by clicking on the following link

Quadratic Inequalities

4.1 READING ASSIGNMENT

READ pp. 249-255 by clicking on the following link

More Non-Linear Functions

Putting It All Together (PRINT THIS)

http://media.pearsoncmg.com/aw/aw_rockswold_colalg_3/pdfs/rca03_04_01pt.pdf

4.2 READING ASSIGNMENT

READ pp. 261-268 by clicking on the following link

Polynomial Functions and Models

Putting It All Together (PRINT THIS)

http://media.pearsoncmg.com/aw/aw_rockswold_colalg_3/pdfs/rca03_04_02pt.pdf

4.5 READING ASSIGNMENT

READ pp. 302-304 by clicking on the following link

Fundamental Theorem of Algebra

4.7 READING ASSIGNMENT

READ pp. 327-328 ONLY by clicking on the following link

Variation

5.1 READING ASSIGNMENT

READ pp. 368-377 by clicking on the following link

5.1 - Combining Functions

5.2 READING ASSIGNMENT

READ pp. 3385-395 by clicking on the following link

5.2 Inverse Functions

5.3 READING ASSIGNMENT

READ pp. 402 – 413 by clicking on the following link

Exponential Expressions and Models

5.4 READING ASSIGNMENT

READ pp. 421 – 431 by clicking on the following link

Logarithmic Expressions and Models

5.5 READING ASSIGNMENT

READ pp. 438–443 by clicking on the following link

Properties of Logarithims

5.6 READING ASSIGNMENT

READ pp. 447–454 by clicking on the following link

Solving Exponential and Logarithmic Equations

6.1 READING ASSIGNMENT

READ pp. 511-515 by clicking on the following link

Systems of Equations in Three Variables

Summary: Solving Systems of Linear Equations in THREE Variables extends the concept of solving a system of two equations with two unknowns to a system of three equations. (Chapter 6.1-6.2 - Systems of Equations in Two Variables is a review of MATH 0300 - Beginning Algebra). The solution to a system of equations is the "set" of values which will make all the equations true (i.e. the left side will equal the right side).

The steps to solve a system of equations in two variables, x and y using the elimination method.
Step 1: Multiply equation(s) by a value to create an "additive inverse" in one of the variables, if necessary.
Step 2: Add the equations together to "eliminate" one of the variables.
Step 3: Solve the resulting equation for the remaining variable.
Step 4: Substitute the value from Step 3 back into one of the original equations and solve for the "eliminated" variable (the other unknown).
Step 5: Check the solution by substituting the values into both equations to ensure that both equations are true.

When you have three equations with three unknowns, you perform this process three times. I approach these very systematically, always using the same "pairs" of equations, but as the videos will show, you can select "any pair" of equations. Here are the steps:
1) First you pair the first and second equation together and eliminate one of the variables using Step 1 and Step 2 above. This will result in a new equation from this pair with only two variables.
2) You then repeat this process again with the second and the third equation, eliminating the same variable in this pair of equations. This results in a second equation with the same two variables.
3) The whole process from above (Steps 1-4) are performed on this "new" pair of equations from steps 1) and 2). This will result in an equation in one variable.
4) Solve for the unknown equation from step 3), substitute it into one of the equations from step 1) or 2) to solve for the other unknown. Then substitute these two values back into one of the original equations to solve for the remaining third variable.
5) Check the "set" of values in all three equations to ensure that these values will result in a true statement in all three equations.