As a result of home and classroom study, the students at the termination of this course will demonstrate the following knowledge and skills:

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<th>OUTCOMES</th>
<th>ACTIVITIES</th>
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</table>
| Perform arithmetic operations with real numbers                          | 1. Add, subtract, multiply, and divide whole numbers, signed numbers, decimal numbers and fractions.  
2. Demonstrate an understanding of place value by writing a given numeral in standard notation, expanded notation, and in words.  
3. Convert fractions into their decimal equivalents.  
4. Convert between regular decimal notation and scientific notation.  
2. Hand-in assignments.  
3. In-class problems.  
5. In-class tests.                                                      |
| Use the Order of Operations to do calculations                            | 1. Simplify an expression using the order of operations agreement.  
2. Hand-in assignments.  
3. In-class problems.  
5. In-class tests.                                                      |
| Translate English sentences about numbers into algebraic equations        | 1. Differentiate between an expression and an equation.  
2. Correctly identify English phrases corresponding to addition, subtraction, multiplication and division  
3. Construct an algebraic equation from a sentence about quantities.       | 1. Web-based homework problems.  
2. Hand-in assignments.  
3. In-class problems.  
5. In-class tests.                                                      |
| Solve and graph linear equations/inequalities and functions              | 1. Determine whether a given number is a solution of an equation/inequality.  
2. Solve equations/inequalities containing fractions and parentheses.  
3. Solve literal equations.  
4. Translate and solve number problems, percent problems, ratio and proportion problems.  
5. Plot points and find the coordinates of a given point.  
6. Graph an equation/inequality by plotting points, by finding the $x$-, and $y$-intercepts, and by using the slope-intercept method.  
7. Find the slope of a line given two points or given an equation of the line.  
8. Write an equation of a line given a point and the slope, two points, or information about parallel and perpendicular lines.  
9. Determine when two lines are parallel, perpendicular or neither.        | 1. Web-based homework problems.  
2. Hand-in assignments.  
3. In-class problems.  
5. In-class tests.                                                      |
| Solve two simultaneous linear equations by several methods                | 1. Solve a system of linear equations in two variables by graphing, the substitution method, and the addition method.  
2. Determine if a system of linear equations is inconsistent or dependent. | 1. Web-based homework problems.  
2. Hand-in assignments.  
3. In-class problems.  
5. In-class tests.                                                      |
| Solve application problems involving linear equations | 1. Solve mixture, percentage, distance, and number word problems. | 1. Web-based homework problems.  
2. Hand-in assignments.  
3. In-class problems.  
5. In-class tests. |
|-----------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Use a graphing calculator                           | 2. Use the calculator to evaluate expressions.  
3. Use the calculator to build a table of values for a function.  
4. Use the calculator to graph an equation/inequality.  
5. Use the calculator to find the intersection of two lines. | 1. Hand-in assignments  
2. In-class problems  
3. In-class tests |