MATH 1000 Learning Competencies

Learning Competencies: Upon completion of this course, students will be able to:

1. Solve linear absolute value equations in one variable.
2. Graph linear inequalities in two variables, as well as systems of two linear inequalities.
3. Solve application problems involving percent, ratios, and proportions.
4. Solve geometric problems involving perimeter and area of rectangles, circles, and triangles, as well as volumes of the three dimensional counterparts.
5. Solve equations for specified variables.
6. Solve linear inequalities in one variable, graph the solution set on a number line, and write the solution set using interval and/or set-builder notation.
7. Use exponent rules to simplify exponential expressions.
8. Convert between decimal notation and scientific notation.
9. Perform operations on polynomials.
10. Factor polynomials completely.
11. Simplify and perform operations on rational expressions, including complex fractions.
12. Solve rational equations.
13. Simplify radical expressions with integer radicands.
14. Perform operations on radical expressions.
15. Solve quadratic equations using multiple approaches including factoring and quadratic formula.
16. Graph quadratic equations using the vertex formula and intercepts.
17. Solve application problems using the distance formula and the Pythagorean theorem.
18. Determine whether a relation represents a function, use function notation, and evaluate functions.

    *Supporting material of fraction arithmetic, order of operations, properties of algebra, solving linear equations, graphing lines, finding slope, and equations of lines will be covered as needed.