Math Preparation Language For Non-Transferable Courses

Updated 10/24/17

Beginning in the Fall 2018, MATH 020, MATH 030, MATH 050, and MATH 070 will no longer be offered by the Math Department. The following is a collection of the exiting skills for the courses that are now being offered.

MATH 033 Mathematical Foundations

1. Read and write whole numbers, fractions, decimals and integers.
2. Round whole numbers and decimals to a given place value.
3. Simplify fractions, write equivalent fractions.
4. Use the order of operations agreement to evaluate numerical expressions involving whole numbers, fractions, decimals and integers.
5. Convert between fractions, decimals, and percents.
6. Solve simple word problems involving whole numbers, fractions, decimals, integers, percents, and proportions.
7. Simplify and evaluate algebraic expressions using real number properties.
8. Translate English expressions to arithmetic or simple algebraic expressions and vice-versa.
9. Find the perimeter and area of simple geometric figures.
10. Find the volume of simple polyhedrons using formulas.
11. Convert measures within the metric and US systems.
12. Solve one-step linear equations.

MATH 053 B-STEM Elementary Algebra

1. Solve linear equations and inequalities and their applications.
2. Solve rate, ratio and proportion problems involving algebraic expressions.
3. Solve formulas for a variable (literal equations).
4. Simplify expressions with integer exponents.
5. Interpret linear data in the form of words, algebraic equations, data tables, or graphs and translate that same information in one of the alternate forms.
6. Solve systems of linear equations in two and three variables and their applications.
7. Factor binomials and trinomials including Difference of Squares, Sum/Difference of Cubes, and Square of a Sum/Difference.
8. Solve quadratic equations using factoring.
9. Solve linear equations and inequalities incorporating absolute values.

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MATH 060 Geometry

1. Measure lengths and angles with basic tools.
2. Describe lines, angles, polygons, and circles and their properties.
3. Distinguish angles and polygons by their properties.
4. Demonstrate use of appropriate formulas to determine area, perimeter, circumference and angles of polygons and circles and for volume and surface area of three-dimensional figures.
5. Apply the Pythagorean Theorem to right triangles.
6. Solve 30-60-90 and 45-45-90 triangles for sides and angles
7. Demonstrate constructions and use them to solve practical problems.
8. Write and critique proofs regarding congruence and similarity of geometric figures.
9. Use ratio and proportion to solve geometric problems.

MATH 062 Pre-Statistics

1. Demonstrate understanding of connections between fractions, decimals and percentages within the context of basic statistics.
2. Use the Order or Operations Agreement to evaluate expressions.
3. Simplify products and quotients of numbers in scientific notation format, and express the result in scientific notation format.
4. Simplify intersections and unions of sets, including intervals of numbers.
5. Find complements of sets.
6. Solve linear equations.
7. Solve literal equations.
8. Graph linear equations in two variables.
9. Construct, use and interpret elements of linear models in applications.
10. Demonstrate proper use and understanding of mathematical notation, including set notation, interval notation, summation notation, and probability.
11. Construct/interpret frequency distributions, histograms, box plots, scatter plots, and contingency tables.
12. Compute measures of central tendency and standard deviation.
13. Produce a coherent and well-reasoned descriptive analysis of data, based on numerical and graphical representations, to answer a research question.
14. Choose the appropriate techniques from probability to solve problems.
15. Compute permutations and combinations.

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MATH 073 B-STEM Intermediate Algebra

1. Solve problems involving linear equations in two or more variables.
2. Solve quadratic equations using different methods.
3. Incorporate operations and simplifications of rational expressions to solve equations and inequalities.
4. Incorporate operations and simplifications of radicals to solve equations.
5. Incorporate operations and simplifications of complex numbers to solve equations.
6. Solve exponential and logarithmic equations.
7. Use function notation and graph basic functions.
8. Perform function operations as well as composition of functions to determine inverse functions.
9. Solve applied problems involving rational, radical, exponential and logarithmic equations.