Math 95 Master Syllabus

Course Outcomes:

The successful math 95 student can:

- solve linear equations in two variables
- solve world problems involving linear equations and systems of linear equations
- interpret the slope and points of a line in the context of a word problem
- accurately and efficiently perform calculations with real numbers including fractions, decimals, signed numbers, absolute value, etc.
- identify equations as linear, exponential, or polynomial
- factor quadratic and other polynomial expressions including when the leading coefficient is not 1.
- solve quadratic equations by factoring, using the square root property, or using the quadratic formula
- perform operations involving polynomial and rational expressions
- solve equations containing rational expressions
- simply and perform operations involving radicals/rational exponents
- solve equations involving radical expressions
- apply the rule of functions including accurately applying function notation
- find the largest possible domain and range of a function from its graph
- find the largest possible domain of a linear, quadratic, square root, or rational function from its graph or equation
- solve compound inequalities
- identify the vertex and intercepts of a quadratic function (in vertex form or standard form)
- solve word problems involving quadratic equations
- recognizes exponential vs. linear modeling. The student knows linear means increasing by a constant amount while exponential means increasing by the same percentage.
- solve absolute value equations
- solve simple absolute value inequalities by finding the $x$-intercepts
- solve systems of non-linear equations involving quadratic and linear equations.

Possible/Rough Timeline:

Week 1: Review Linear Equations with an emphasis on modeling, lots of interpreting of the slope, intercepts, points/Quadratics and factoring

Week 2: Factoring/system of linear equations, system of equations with both lines and quadratics, recognizing exponential vs. linear vs. quadratic equations with modeling

Week 3: Catch-up, Rational expressions and equations

Week 4: Continue Rational expressions and equations

Week 5: Introduction to function notation/domain and range

Week 6: Absolute value equations, compound inequalities
Week 7: Absolute value inequalities, rational exponents, radical expressions

Week 8: Radical equations, catch-up, quadratics

Week 9: Quadratics

Week 10: Catch-up/Review

Materials


Optional online platforms: Connect or Aleks