Math 70 Master Syllabus

Course Outcomes:

The successful Math 70 student is able to:

- accurately use the order of operations in order to reduce an expression, including those with absolute values, signed numbers, fractions, and/or decimals.
- add, subtract, multiply, and divide fractions and decimals
- explain when and why to use common denominators when performing operations on fractions
- identify whether a number is a whole number, an integer, or a real number
- simplify and evaluate algebraic expressions
- solve and simplify linear equations
- interpret a point on a line in the context of a word problem
- interpret the slope of a line in the context of a word problem
- graph linear equations in two variables
- determine the intercepts of a given line whether from a graph or from an equation
- determine whether a basic equation is linear or exponential
- determine from a table of values whether an equation is linear or exponential
- solve systems of linear equations
- solve a variety of world problems based on linear equations or systems of linear equations
- manipulate exponential expressions, and use scientific notation
- factor quadratic and other polynomial equations
- solve quadratic equations
- identify whether an equation is linear, quadratic, or exponential

If time:
- basic simplifying of square roots and knowing $x^2 = 25$ means $x = \pm \sqrt{5}$
- basic use of quadratic formula

Possible/Rough Timeline:

Week 1: Order of Operations/signed Numbers/operations with Real Numbers
Week 2: Algebraic expressions/order of operations/algebraic properties
Week 3: Solving Algebraic equations in one variable/modeling with algebraic equations in one variable
Week 4: Inequalities in one variable/introduction to lines through modeling and graphing
Week 5: Linear equations in two variables, introduction of exponential equations
Week 6: Systems of linear equations (with lots of modeling)
Week 7: Catch-up, parallel and perpendicular lines, more modeling with lines and systems of equations of lines
Week 8: Integral exponents, Quadratic equations, factoring
Week 9: Continue quadratics
Week 10: Review/Catch-up

Materials


Optional online platforms: Connect or Aleks