Exam 2 Topics

The following is a list of ideas/concepts that may or may not show up on exam 2. Note that this list may not be complete. Additionally, ideas are carried through multiple sections. Anything covered in class or on homework is fair game. There will be no notes, books, or calculators allowed for the exam. You will only need yourself and a writing utensil. Please bring your graphing calculator in case there is a calculator portion of the exam.

4.1: Commutative, Associative, and Distributive Laws

- Definitions: simplified (expressions)

- Be able to use the associative, commutative, and distributive laws to simplify an expression

- Be able to show an expression or equation is false

4.2: Simplifying Expressions

- Definitions: coefficient, like terms

- Be able to simplify an expression

- Be able to turn a statement in words into an expression and then simplify it

4.3: Solving Linear Equations in One Variable

- Definitions: linear equation in one variable, solution, solution set, solve, equivalent equations,

- Be able to solve linear equations in one variable

- Be able to determine if a value is a solution to a given equation

- Be able to determine a solution using a graph

- Be able to set up equations and find solutions to real life examples

4.4: Solving More Linear Equations in One Variable

- Definitions: conditional equation, identity, inconsistent equation (contradiction)

- Be able to eliminate fractions or decimals to come up with an easier equivalent equation to solve

- Be able to determine if an equation is conditional, an identity, or inconsistent

4.5: Comparing Expressions and Equations

- Be able to determine if a given statement is an expression or an equation

- Be able to solve or simplify based on what is given

4.6: Formulas

- Definitions: perimeter

- Be able to determine the perimeter of any given polygon

- Know and be able to use the formulas for the

  - Area of a rectangle
  - Total Value
  - Area of a Right Triangle

- Be able to create a formula for a given situation

5.1: Graphing Linear Equations

- Be able to find the x and y intercepts of a line

- Be able to graph a line using its intercepts

5.2: Functions

- Definitions: relation, domain, range, function

- Be able to interpret any representation of a relation

- Be able to find the domain of a relation

- Be able to find the range of a relation

- Understand that the domain is related to the inputs

- Understand that the range is related to the outputs

- Be able to determine if a relation is a function

- Be able to use the Vertical Line Test to determine whether or not a relation is a function

- Be able to come up with a graph of a relation that has a given domain and range

5.3: Function Notation

- Be able to write an equation in function notation

- Be able to use function notation to identify the independent and dependent variables

- Understand function notation

- Be able to relate function notation to the graph of the function

5.4: Finding Linear Equations

- Definitions: slope-intercept form, point-slope form, piecewise function

- Be able to write the equation of the line in slope-intercept form given certain information

- Be able to write the equation of the line in point-slope form given certain information

- Be able to graph a piecewise function

- Be able to find the domain and range of a piecewise function using its graph

- Be able to find outputs of a piecewise function given its graph

- Be able to find outputs of a piecewise function given specific inputs

6.1: Solving Systems by Graphing

- Definitions: system of linear equations in two variables, solution to a system, inconsistent, dependent

- Be able to solve a system of linear equations by graphing

- Be able to solve a system of linear equations using a table

- Be able to identify a system as inconsistent or dependent when appropriate

- Understand that a solution to a system is an ordered pair

- Understand graphically what it means for a system to be inconsistent/dependent

6.2: Solving Systems by Substitution

- Be able to solve a system of linear equations using substitution

- Be able to state the solution set of any given system using substitution

- Be able to identify a system as inconsistent or dependent when appropriate

6.3: Solving Systems by Elimination

- Be able to solve a system of linear equations using elimination

- Be able to state the solution set of any given system using elimination

- Be able to identify a system as incosistent or dependent when appropriate