

Integrated Math 1 Study Guide for the Semester Exam

Ways to Study:

- Go to my website: www.bolusmath.weebly.com
 - Go over the topics in the textbook
 - Rework old homework problems
 - Make up your own problems
 - Study with a friend

Equations

Write equations from a situation

Solve Equations

Distributive Property

Solving for a Variable (Literal Equations)

Ex: $2x + 3y = 4$ solve for y (get y alone)

Inequalities

Know how to write, solve, and graph inequalities

Compound Inequalities

Functions

Is it a function?

Match a table with a graph or an equation with a graph

Graphs that represent Situations

Continuous vs Discrete Graphs

Function notation

Know how to write functions

Increasing and Decreasing Intervals

X-intercepts, Y-intercepts

Domain and Range

Reasonable Domain and Range

Linear Functions

Find average rate of change

Find slope from a graph

Find slope from 2 points

Interpret the slope or y-intercept from a situation

Slope-intercept form

Standard Form

Word Problems

Linear Inequalities

Know how to write and graph linear inequalities on a coordinate plane

Exponents

Anything to the Zero Power is 1

Negative Exponents $2^{-3} = \frac{1}{8}$

Product Rule: $a^2 \cdot a^3$

Division Rule: $\frac{a^3}{a^2}$

Power to a Power Rule: $(a^2)^3$

Exponentials

The difference between a linear and exponential chart

Writing the exponential function from a table or a graph

Domain and Range from a Graph

Write an exponential function for a situation

Ex: The number of fish in a pond can be modeled by the function $f(t) = 1200(0.85)^t$, where t is the number of years. 1200 is the initial amount of fish.

The amount is decreasing by 15% each year.

Compound Interest

Sequences

Arithmetic and Geometric Sequences

Find the indicated term of the sequence

Explicit and Recursive Formulas

Linear Data

Types of Correlation

Causation vs Correlation

Correlation Coefficient

Line of Best Fit