Integrated Math 1 Study Guide for the Final Exam

Ways to study:

* Go to my website: [lischwe.weebly.com](http://www.bolusmath.weebly.com)
* Go over the topics in the textbook
* Review your notes
* Review your homework/worksheets
* Call a friend!

Basics of Geometry

Know how to name a line, segment, ray, plane, angle

Segment Bisector, Angle Bisector,

Midpoint between two points on a graph

Distance between two points on a graph

Transformations

Translate with a vector

Rotations about the origin

Reflections (across the y-axis, across the x-axis, across the line y=x, across the line y = -x)

Rigid motions = rotations, translations, reflections

Non-rigid motions = dilations

Congruent Figures

Identify Corresponding Congruent Parts

Proofs (2-column, flow-chart, paragraph)

Filling in missing statements/reasons in proofs

Triangle Congruent Shortcuts: SSS, SAS, ASA, AAS

Don’t Work: SSA, AAA

CPCTC

Lines and Angles

Vertical Angles

Linear Pair

Adjacent Angles

Complementary Angles

Supplementary Angles

Parallel Lines with Transversals

Corresponding Angles

Alternate Interior Angles

Alternate Exterior Angles

Same-Side Interior Angles

Find missing angle measures

Properties of Triangles

Isosceles Triangles (Base Angles are Congruent)

The angles in a triangle sum to 180 degrees

Midsegment

Altitude

Median

Quadrilaterals

Know the properties of all quadrilaterals

See flow chart notes sheet

Equations

Write equations from a situation

Solving equations

Solving for a Variable

Inequalities

Know how to write, solve, and graph inequalities

Functions

Know what is and what isn’t a function

Know function notation

Find the value of a function on a graph

Know how to write functions and identify independent and dependent variables

Know how to graph functions

Domain and Range

Linear Equations

Find slope from a graph

Find slope from 2 points

Know how to graph:

Slope-intercept form

Standard Form

Point-slope Form

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} $= $\frac{1}{8}$

$$a^{2}∙a^{3}$$

$$\frac{a^{3}}{a^{2}}$$

$$(a^{2})^{3}$$

Exponentials

Write an exponential function for a situation

*Ex: The number of fish in a pond can be modeled by the function* $f\left(t\right)=1200\left(0.85\right)^{t}$*, 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 vs Geometric

Find the indicated term of the sequence

Write an Explicit and Recursive Formula

Systems of Equations

Solve by Graphing

Solve by Substitution

Solve by Elimination

Systems of Inequalities

Solve by Graphing

(find where shaded regions overlap)

Data and Statistics

Histograms

Dot Plots

Skewed Left, Skewed Right, Symmetric

Box Plots

Range

Interquartile Range

Mean, Median, Mode

Frequency Tables (given a table, find the percent of people who fall in certain categories)

Scatter Plots

Positive, Negative, No Correlation

Correlation Coefficient

Line of Best Fit

Simplifying Radical Expressions

Be able to simplify roots

Pythagorean Theorem

Find the length of a leg or the hypotenuse

Polynomials

Be able to add and subtract polynomials

Be able to multiply polynomials