



Grading

Grades are based on effort and proficiency. Students who work as hard as they can and have excellent attendance get very good grades. It is the student's responsibility to keep track of his or her grade. Late work may be penalized. Students are encouraged to collaborate, but with a sense of academic honesty.

What you'll need

Graphing calculators are encouraged. I recommend and provide support for the TI-83+. Have a notebook dedicated to math only so that you can turn it in without missing it for other classes.

Course support

I maintain a class blog giving a narrative of our day-to-day activities and notice of upcoming important events, e.g., tests and due dates. Students who come in before and after school to keep up with their work will be cordially welcomed. Students who expect me to do a quarter's worth of work with them at the last minute will have a problem. I often respond to questions outside of school hours as well.

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<http://homepage.mac.com/sobrietyhighwest/math/math.html> (math website)

<http://west.sobrietyhigh.org> (school curriculum website)



Sobriety High West Mathematics B

2007–2008 Units and topics



Voting

- Mathematical modeling
- Number sense
- Percentages
- Preference diagrams
- Graph theory
- Majority, plurality, runoff
- Pairwise comparison

Scene From Above

- Scale
- Unit conversion
- Area
- Distance
- Scientific notation
- Ratios
- Delta notation
- Precision
- Zoom factor
- Similarity
- Proportion
- Direct variation function
- Dilation
- Pythagorean Theorem
- Monte Carlo method

Imperfect Testing

- Decimals, fractions, percents
- Variability due to sampling
- Probability
- Scatter plots
- Line graphs
- Mutually exclusive events
- Complementary events
- Conditional probability
- Two-way tables and tree diagrams
- Independence
- Linear functions
- Domain
- Distributive property
- Inverse of a linear function

Auto Buying/Leasing

- Modeling
- Financing
- Depreciation

Gridville

- Distance in fire-truck geometry
- Circles in fire-truck geometry
- Total and average distance in one-two dimensions
- Addition of functions
- Slope and rate-of-change
- Absolute-value questions and inequalities
- Piecewise-defined functions
- Median
- Transformation of functions
- Maximum distance in one-two dimensions
- Midrange
- Step functions

The Right Stuff

- Measurement
- Area
- Volume
- Perimeter
- Similarity
- Surface area of solids
- Proof
- Symmetry
- Tangents
- Congruence
- Polygons
- Right triangles
- Equilateral triangles
- Circumference
- 30°-60°-90° triangle relationships
- Deductive reasoning
- Inductive reasoning
- Converse, inverse, contrapositive
- Parallel lines
- Alternate interior angles
- Corresponding angles
- Vertical angles
- Diagonals of polygons
- Pythagorean formula
- Aspect ratio
- Quadratic equations
- Compass-straightedge constructions

Proximity

- Simple arithmetic mean
- Voronoi diagram
- Area
- Volume
- Weighted averages
- Algorithm
- Geometric construction
- Polygons
- Perpendicular bisector
- Heron's formula
- Pick's formula
- Coordinate geometry
- Systems of equations
- Reflection
- Iteration

