Peter Left

Waldwick High School

Math

2025-2026

Methods of Contact

WHS Main Line: 201-652-9000
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Extra Help

Extra help is held each day
from: 2:58 p.m. - 3:13 p.m.

Supplies can be found under individual class headings.

Precalculus CPE

Statistics

Geometry Honors

AP Statistics

Geometry CPE

For updates on deadlines and assignments refer to Google Classroom

Precalculus CPE

Syllabus, Supplies & Links

Syllabus

Desmos

Geogebra

Supplies

- Notebook – Any type
- Pencils (enough to last the year)
- Folder
- Scientific or Graphing Calculator

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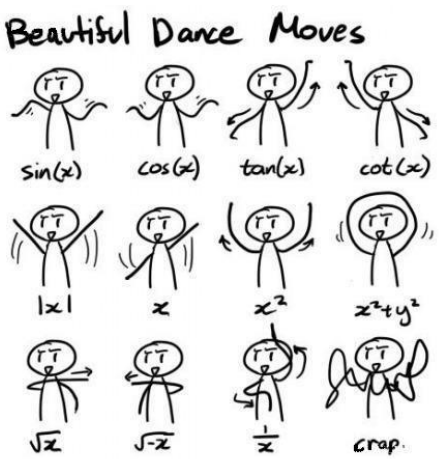

image from http://weknowmemes.com via Google Image search

Topics Covered

A. Quadratic Functions

1. Complex Numbers
2. Quadratic Equations
3. Parabolic Functions
4. Quadratic Models (Word Problems)

B. Zeros and Factors of Polynomial Functions

1. Polynomials
2. Remainder Theorem
3. Factor Theorem
4. Graphing Polynomial Functions
5. Word Problems
6. Rational Root Theorem
7. Polynomial Theorems

C. Inequalities

1. Linear Inequalities; Absolute Value
2. Polynomial Inequalities in One Variable
3. Polynomial Inequalities in Two Variables
4. Linear Programming: Optimization (Word Problems)

D. Functions

1. Introduction: Definitions
2. Function Operations
3. Reflections/Symmetry
4. Periodic Functions
5. Inverse Functions
6. 2-Variable Functions
7. Writing Functions in 2 Variables (Word Problems)

E. Exponents and Logarithms

1. Integral Exponents (Growth/Decay)
2. Rational Exponents (Growth/Decay)
3. Exponential Functions
4. Natural Base (e)
5. Logarithms
6. Laws of Logarithms

Topics Continued

G. Trigonometric Equations and Identities

1. Solving Basic Trigonometric Equations with a Frequency of 1
2. Tangent as Slope of a Line
3. Basic Identities
4. Using Identities to Solve Equations

H. Right Triangle Trigonometry

1. Right Triangle Trigonometry Definitions
2. Area of a Triangle
3. Law of Sines
4. Law of Cosines
5. Combining Trig Laws (Word Problems)
6. Navigation and Surveying (Career)

I. Trigonometric Formulas

1. Sum/Difference Formulas for Sine and Cosine
2. Sum/Difference Formulas for Tangent
3. Double Angle Formulas for Sine, Cosine, & Tangent
4. Applications of Formulas

J. Polar Coordinates

1. Introduction to Polar Coordinate System
2. Polar Form of Complex Numbers
3. Powers of Complex Numbers
4. Roots of Complex Numbers

K. Vectors

1. Introduction to Vectors (Geometric Properties)
2. Component form of Vectors
3. Vectors and Parametric Equations
4. Vectors and Angles

L. Sequences and Series

1. Arithmetic and Geometric Sequences
2. Recursive Sequences
3. Arithmetic and Finite Geometric

	F. Trigonometric Functions 1. Radian Measure 2. Evaluate Basic Trig Functions From Unit Circle and Special Right Triangles (Non-calculator) 3. Reciprocal Trigonometric Functions (Non-calculator) 4. Inverse Trigonometric Functions (Non-calculator) 5. Evaluating Trigonometric Functions on a Calculator 6. Graphing Sine & Cosine Functions 7. Translations of Sine and Cosine Graphs 8. Secant & Cosecant Graphs 9. Tangent/Cotangent Graphs 10. Mixed Graphs	Series 4. Limits of Infinite Sequences 5. Sums of Infinite Series 6. Sigma Notation *M. Limits of Functions* 1. Infinite and Non-Infinite Limits of Functions *N. Derivatives* 1. Derivative as Slope of a Curve 2. Power Rule 3. Relative (Local) Extrema 4. Extreme Value Problems (Word Problems) 5. Velocity and Acceleration

Statistics

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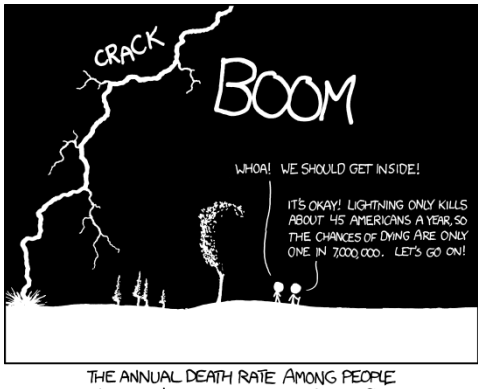

image from http://xkcd.com

Topics Covered

A. *Understanding Data*

1. Displaying Distributions with Graphs
2. Describing Distributions with Numbers
3. The Normal Distribution

B. *Examining Relationships*

1. Scatter-plots
2. Correlation
3. Least-Squares Regression
4. Interpreting Correlation and Regression

C. *Producing Data*

1. Designing Samples
2. Designing Experiments
3. Sampling Distribution
4. Probability Distribution
5. Sample Proportions
6. The Binomial Distribution
7. Sample Means
8. Control Charts

D. *Introduction to Inference*

1. Estimating with Confidence
2. Tests of Significance
3. Using Significance Tests
4. Inference as a Decision

E. *Inference for Distributions*

1. Inference for the Mean of a Population
2. Comparing Two Means
3. Inference for Population Spread

Topics Continued

F. *Inference for Proportions*

1. Inference for a Population Proportion
2. Comparing Two Proportions

G. *Inference for Two-Way Tables*

1. Two-Way Tables
2. The Chi-Square Test

H. *Comparing Several Means*

1. The Analysis of Variance F test
2. Some Details of ANOVA

I. *Inference for Regression*

1. Inference about the Regression Model
2. Inference about Prediction
3. Checking the Regression Assumption

Geometry Honors

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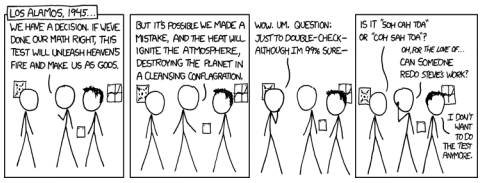

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A. *Introduction to Geometry*

1. What is Geometry and why do we study it?
2. Basic Geometric Terms
3. Measurement of Segments and Angles
4. Types of Angles
5. Concept of Congruence
6. Collinearity, Betweeness, and Assumptions
7. How to Interpret a Diagram
8. Introduction to Proofs
9. Division of Segments and Angles
10. Paragraph Proofs
11. Deductive Structure: Elements
12. Statements of Logic
13. Probability

B. *Basic Concepts and Proofs*

1. Perpendicularity
2. Complementary and Supplementary Angles
3. Drawing Conclusions
4. Congruent Supplements and Complements
5. Addition and Subtraction Properties
6. Multiplication and Division Properties
7. Transitive and Substitution Properties
8. Vertical Angles

C. *Congruent Triangles*

1. What are Congruent Figures?
2. Three Ways to Prove Triangles Congruent
3. CPCTC: Corresponding Parts of Congruent Triangles are Congruent
4. Beyond CPCTC: Medians and Altitudes, Auxiliary Lines
5. Overlapping Triangles

F. *Lines and Planes in Space*

1. Relating Lines to Planes
2. Perpendicularity of a Line and a Plane
3. Basic Facts About Parallel Planes

G. *Polygons*

1. Triangle Application Theorems
2. Two Proof Triangle Theorems
3. Formulas Involving Polygons
4. Regular Polygons

H. *Solving Triangles with Trigonometry*

1. Similar Polygons
2. Ratio and Proportion
3. Similarity
4. Methods of Proving Triangles Similar
5. Congruence and Proportions in Similar Triangles
6. Three Theorems Involving Proportions

I. *The Pythagorean Theorem*

1. Radical Review
2. Altitude on Hypotenuse Theorem
3. Geometry's Most Elegant Theorem: Pythagorean Theorem
4. The Distance Formula
5. Families of Right Triangles
6. Special Right Triangles
7. Introduction to Geometry
8. Trigonometric Ratios

J. *The Circle*

1. The Circle
2. Congruent Chords
3. Arcs of a Circle

6. Types of Triangles
7. Angle Side Theorems
8. HL Postulate

D. *Lines in a Plane*

1. Detours and Midpoints for Triangles
2. The Case of the Missing Diagram
3. The Right-Angle Theorem
4. The Equidistance Theorems
5. Introduction to Parallel Lines
6. Slope

E. *Parallel Lines and Related Figures*

1. Proving that Lines are Parallel
2. Exterior Angle Inequality Theorem in Triangles
3. Congruent Angles Associated with Parallel Lines
4. Proving that Lines are Parallel
5. Four-Sided Polygons
6. Properties of Quadrilaterals
7. Prove that a Quadrilateral is a Parallelogram
8. Proving that Figures are Special Quadrilaterals

4. Introduction to Circles
5. Secants and Tangents
6. Angles Related to Circles
7. More Angle-Arc Theorems
8. Inscribed and Circumscribed Polygons
9. The Power Theorems
10. Circumference and Arc Length

K. *Area*

1. Understanding Area
2. Areas of Parallelograms and Triangles
3. Areas of Trapezoids
4. Areas of Kits and Related Figures
5. Understanding Area
6. Areas of Regular Polygons
7. Areas of Circles, Sectors, and Segments

L. *Surface Areas*

1. Surface Areas of Prisms
2. Surface Areas of Pyramids
3. Surface Areas of Circular Solids, Cylinders, Cones, and Spheres
4. Volumes of Pyramids and Cones
5. Volume of Spheres

M. *Coordinate Geometry*

1. Graphing Equations
2. Equations of Lines
3. Slope

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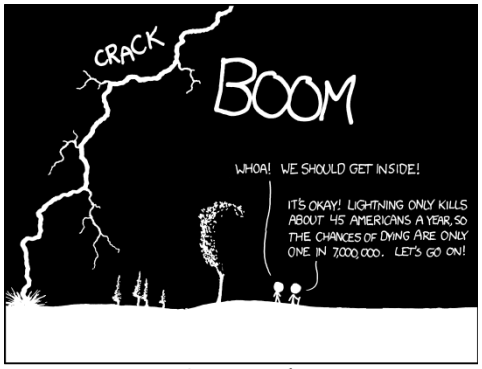

THE ANNUAL DEATH RATE AMONG PEOPLE WHO KNOW THAT STATISTIC IS ONE IN SIX.

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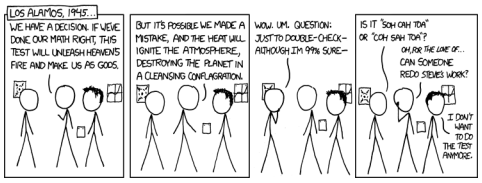

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