

Math Analysis Standards

Chapter 1 Standards

1a	Use the Pythagorean Theorem to find missing sides in a right triangle
1b	Use the sine, cosine, and tangent functions to find missing sides in a right triangle
1c	Use the inverse sine, cosine, and tangent functions to find missing angles in a right triangle
1d	Apply Standards 1a, 1b, and 1c to solve mathematical models involving right triangles (<i>real-world problems</i>)
1e	Find missing sides and angles of an oblique triangle using the Law of Cosines
1f	Find missing sides of an oblique triangle using the Law of Sines
1g	Use the Laws of Cosines and Sines to solve mathematical models involving triangles (<i>real world problems</i>).

Chapter 2 Standards

2a	Draw angles that are negative or are larger than 180° .
2b	Find the quadrant and reference angles of a given angle in standard position.
2c	Given a point or the quadrant of the terminal side of an angle, find the six exact trigonometric values.
2d	Use exact values from the special triangles to simplify trigonometric expressions
2e	Convert between radians and degrees.
2f	Use a calculator to find approximate trigonometric values for a given angle and approximate angle values for a given trigonometric value.
2g	Find and draw a resultant vector from other component vectors.
2h	Find the direction angle of a resultant vector from other component vectors.

Chapter 3 Standards

3a	Graph a given equation of the sine or cosine function using the graphing calculator
3b	Identify and illustrate graphically the traits of a sinusoidal function
3c	Solving for values of x and y in a sinusoidal function
3d	Model and solve sinusoidal situations
3e	Graph a given equation of the tangent, cotangent, secant, and cosecant functions using the graphing calculator
3f	Identify and illustrate graphically the traits of a quotient or reciprocal trig function

Chapter 4 Standards

4a	Prove Trigonometric Identities and use them to simplify Trigonometric equations
4b	Find exact trigonometric values for composite arguments.
4c	Solve equations involving composite argument rules.
4d	Prove identities involving composite rules.
4e	Find exact trigonometric values for double angle trigonometric functions.
4f	Solve equations involving double angle rules.
4g	Prove identities involving double angle rules.
4h	Find exact trigonometric values for half angle trigonometric functions.
4i	Solve equations involving half angle rules.
4j	Prove identities involving half angle rules.

Derivative Preview Standards

PC1	Write and sketch a secant line using the slope equation
PC2	Write and sketch a tangent line using the limit of a slope equation (derivative definition at a point)
PC3	Use the Power Rule to find the derivative of a function
PC4	Use secant and tangent line slopes to find average and instantaneous velocity
PC5	Find the equation of a tangent line using the Power Rule
PC6	Find the relative max/min of a polynomial function using the Power Rule
PC7	Find the instantaneous velocity of a polynomial function of position using the Power Rule

Statistics Standards

STS 1-2	Understands, explains, and applies key terms and concepts from Chapters 1 & 2
STS 3	Understands, explains, and applies key terms and concepts from Chapter 3
STS 4	Understands, explains, and applies key terms and concepts from Chapter 4
STS 5	Understands, explains, and applies key terms and concepts from Chapter 5
STS 6	Demonstrates proficiency with spreadsheets using Excel/Numbers

Statistics Chapter 7

STS 7a	Calculate the mean and standard deviation of a set of data using the formula for each
STS 7b	Display a set of data as a box plot in order to give a five number summary
STS 7c	Identify outliers in a set of data
STS 7d	Express a set of data as a stem-leaf plot and as a histogram (bar graph)
STS 7e	Discern between the value of a five-number summary and Bell Curve

Probability

P1	Apply the Law of Multiplication to find the probability of an event
P2	Apply the Law of Addition to find the probability of an event
P3	Apply the Law of Complements to find the probability of an event
P4	Use Venn Diagrams to calculate probabilities of all possible outcomes from a sample space
P5	Use Tree Diagrams to calculate probabilities of all possible outcomes from a sample space