**Trigonometry and Related topics**

**Pacing Guide 2013-14**

**Chapter 6: Angle Measure:**

**Targets:**

Students will be able to evaluate the trigonometric functions for any angle, giving exact answers as appropriate.

Students will be able to use inverse trig functions to find angle measures.

Students will be able to model and solve right triangle applications.

6.1 Radian, degrees, and co-terminal

Arc length and area

Applications

6.2 Soh-Cah-Toa

Special right triangles

Applications

**Quiz 6.1-6.2**

6.3 Trig function

Reference angles

Area of triangles

6.4 Inverse trig and right triangles

applications

**Quiz 6.3-6.4**

**Chapter 6 Test**

**Chapter 5: Trigonometric Functions**

**Targets:**

Students will be able to define the six trigonometric functions utilizing the unit circle.

Students will be able to graph sine, cosine, and tangent and identify characteristics of the graph.

Students will be able to model and solve sinusoidal real world applications.

5.1 The Unit Circle

Reference angles

5.2 Trig functions

Special right triangles

Domain and signs

**Quiz 5.1-5.2**

5.3 Trig graphs

Sine and cosine- amp

Horz/vert stretches/shrinks & shifts

tangent graph

**Quiz 5.3**

5.6 Applications joining all concepts

**Chapter 5 Test**

----------------------------------***End of Quarter 1*** ------------------------------------------------

**Chapter 6: again...**

**Targets:**

Students will be able to model and solve any triangle using the laws of sines and cosines.

6.5 Law of Sines

Applications

6.6 Law of Cosines

Applications

Mixed examples

**Quiz 6.5-6.6**

**Targets:**

Students will be able to simplify trigonometric expressions and solve trigonometric equations using identities.

**Chapter 7: Analytic Trigonometry**

7.1 identities—simplifying

proving identities

7.2 Addition and Subtraction formulas

7.3 Double angle formulas

**Quiz 7.1-7.3**

7.4 Basic trig equation

Using identities

7.5 Multiple angle trig functions

**Trig Equation Quiz**

**Chapter 7 Test**

----------------------------------***End of Quarter 2*** ------------------------------------------------

**Chapter 4: Exponential and Logarithmic Functions**

4.1 Exponential functions- with graphs

Compound interest

4.2 Natural Exponential function- continuous interest

Annual Percentage Yield

**Targets:**

Students will be able to evaluate and graph exponential and log functions.

Students will be able to determine domain, range, and asymptotes for exponential and log functions.

Students will be able to solve exponential and logarithmic equations algebraically.

Students will be able to model and solve exponential real world applications.

**Quiz 4.1-4.2**

4.3 Log Functions- evaluate

Properties

Graphing with shifts/reflections

4.4 Laws of logarithms – evaluating

Expanding and combining

Change of base

**Quiz 4.3-4.4**

4.5 Exponential and Log Equations

Algebraically- factoring not a core topic

compound interest applications

4.6 Modeling

Exponential growth equation- (half-life, doubling, tripling etc.)

Optional- Newton’s law of cooling?

**Chapter 4 Test**

**Targets:**

Students will be able to find probability of an event occurring using combinations or permutations.

Students will be able to find the probability of an event occurring using normal distribution.

Students will be able to find measures of central tendency and variability.

Students will be able interpret data given a graphical representation and also create a graphical representation given data.

**Chapter 14: Probability and Statistics**

14.1 Counting- two events in order

Subsets

Permutations

Combinations

\*Calc ok for setup

14.2 Probability

Complement

Union of events

Mutually exclusive

Conditional probability

Intersection of events

**Quiz 14.1-14.2**

14.5 Descriptive Stats- mean, median, mode

Stem and leaf plots

Standard deviation

Frequency tables

Box plot- (w/ check for outliers)

14.6 Graphical

Categorical vs. numerical data

Histograms

Normal distribution- empirical

**Quiz 14.5-14.6**

**Chapter 14 Test**

**Chapter 12: Sequences and Series**

12.1 sequences and summation notation

Given general definition- find nth term

Partial sums

**Targets:**

Students will be able to write an explicit definition when given a sequence or series.

Students will be able to find the sum and the nth term of a geometric series including infinite series.

Students will be able to find the sum and the nth term of an arithmetic sequence/series.

Students will be able to solve applications.

Sigma notation

12.2 Arithmetic Sequences

General definition

Partial sums of

**Short Quiz 12.2**

12.3 Geometric Sequences

General definition

Partial sums

Infinite sums

\*\* Possible intro repeated

decimals as a fraction

**Short Quiz 12.3**

12.4 Mathematics of Finance

Present/future value

**Chapter 12 Test**

**Chapter 11: Conic Sections**

1.8 Circles- definition of

**Target:**

Students will be able to identify, graph, and write equations for all conic sections.

Equations and graphs

11.1 Parabolas- definition of

Equations and graphs

Vertical and horizontal

With shifts

from section 11.4

**Short Quiz 11.1**

11.2 Ellipses- definition of

Equations and graphs

**Short Quiz 11.2**

11.3 Hyperbolas- definition of

Equations and graphs

**Short Quiz 11.3**

**Chapter 11 Test**

\*complete the square for fun if time allow.