**Trigonometry NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**LAP # 1 Chapter 1 Angles and the Trigonometric Functions**

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**Essential Questions:** How is trigonometry used to solve problems, including real-world applications?

**Overview:** In this LAP, we will explore the basics of trigonometry. This includes angles and degrees, velocity, an introduction to the six major trigonometric functions, right triangle trigonometry, and reference angles.

**Rationale:** Part of learning this lap is building the basics that we will use the rest of the semester, but there are also many real world applications in right triangle trig especially. “Determining the size of objects without measuring them physically is one of the principal applications of trigonometry. Long before we dreamed of traveling to the moon, trigonometry was used to calculate the distance to the moon.” (Dugopolski, pg. 43)

**Objectives:**

-graph angles in coordinate plane

-convert between radians and degrees

-calculate arc length, area of a sector, and central angles

-find velocities

-define the six trig functions

-solve right triangles using trig

-calculate reference angles

Enrichment: 1. Conversions DUE:

**Summative LAP Test is available in the testing center**

Summative test will be mostly short answer problems in which you have the opportunity to receive partial credit if you show all work. There may be some multiple choice or true false, but the majority of your points will come from short answer problems.

**Late work from LAP 1 are due at the end of LAP 2.**

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| Day/Date | Objective | Homework |
|  | **Lesson 1*** 1. **Angles and Degree Measure**

SWBAT define parts of an angle,name the quadrant an angle lies in, and graph angles | Read Chapter 1 Section 1p. 49 #1-6, 33-36, 55-62 |
|  | **Lesson 2****1.1 Angles and Degree Measure**SWBAT find coterminal angles, and convert between decimal angles to degree-minute-seconds | p. 49 #8-12, 15-18, 23-24, 63-65, 71-73, 79-82 |
|  | **Lesson 3****1.2 Radian Measure, Arc Length, and Area**SWBAT convert between radians and degrees | Read Chapter 1 Section 2p. 59 #7-12, 17-22, 25-26, 63-71 |
|  | **Lesson 4****1.2 Radian Measure, Arc Length, and Area**SWBAT find arc length and central angles | p. 60 #83-86, 89-92 |
|  | **Lesson 5****1.2 Radian Measure, Arc Length, and Area**SWBAT find area of a sector of a circle, and solve application problems | p. 61 #95-101, 107-108 |
|  | **Lesson 6****1.3 Angular and Linear Velocity**SWBAT use conversions to switch between units, and find velocities | Read Chapter 1 Section 3p. 66 #5-26 |
|  | **Lesson 7****1.3 Angular and Linear Velocity**SWBAT find linear and angular velocities | Read Chapter 1 Section 3p. 66 #27-32, 35-36, 43 |
|  | Review Day  |  |
|  | Test is available in the testing center  |  |