Course Name: Summer 06-Geometry (Online Course)

Objectives: This course provides students with the following topics:

- Lines (line segment, parallel/perpendicular lines, transversal, line bisecting a line segment or an angle)

- Angles (vertical angles, corresponding angles, alternate interior/exterior angles, complementary angles, supplementary angles)

- Triangles

  1. properties of a triangle
  2. three different ways of finding the area of a triangle
  3. isosceles triangles and their properties
  4. equilateral triangles and their properties
  5. right triangles, special right triangles and their properties

- Polygons and some properties of a polygon

- Circles (area of a circle, circumference of a circle, tangent line of a circle)

- Sector of a circle

Lesson Plan

- Lesson 1: Review of linear equations; Introduction of points, lines, and line segments; Introduction of Angles.

- Lesson 2: Review of angles; Bisection of an angle; Vertical angles; Corresponding angles, alternate interior angles, and alternate exterior angles; An application of angles : angle formed by two hands on a clock; 15-minute quiz.

- Lesson 3: Triangles; Properties of triangles; Review the square root of positive integers; 15-minute quiz.

- Lesson 4: Altitude of a triangle; Altitude of a triangle; 15-minute quiz.

- Lesson 5: Pythagorean Theorem; A proof of the Pythagorean Theorem; Applications of right triangles; Special right triangles: $45° - 45° - 90°$ right triangles; 15-minute quiz.

- Lesson 6: Review of equations of the type: $\sqrt{a}x = b$; $30° - 60° - 90°$ - right triangles; 15-minute quiz.

- Lesson 7: Revisit square roots of integers; Old problems or problems from homework; Circles; 15-minute quiz.

- Lesson 8: Triangle inscribed in a circle; Rectangle or square inscribed in a circle or vice versa; Sector of a circle; Arcs of a circle; 15-minute quiz.

- Lesson 9: Review; 15-minute quiz.

- Lesson 10: Finale exam: 1 Hour 30 Minutes.

Attendance Policy: Students are expected to attend each scheduled class meeting. Regular attendance is essential to your success in this course. If you miss a class, you are responsible for the material covered by reading lessons and watching the videos posted online.

Lecture Notes: Lecture notes will be posted on your assignment section after each class as a reference for students to use. All students are required to take notes in class and read them before doing homework.

Homework: Homework will be posted online after each class and must be submitted it online before the next class. It will be graded and the results will be posted online. It is the essential for the students to do the homework as exercises in order to digest the material covered in the class.

Quizzes: A weekly-quiz will be given at the end of each class except the first and the last class. Each quiz is worth of 10 points. Quiz questions will be similar to the questions in the previous homework assignment. Each quiz will be graded and its score will be posted online afterward.

Makeup Quizzes: If a student misses a class, he/she can make it up within two days by printing out the quiz, work it out at home with parent's supervision, and then email it to the teacher for grading with parent's signature on the top of the quiz.

Final Exam: The final exam will be given at the last class. To be prepared for the final exam, student are required to do all problems on the review sheet posted online.

Awards: The students' grades will be evaluated based on their performance in homework assignments, quizzes, and the final exam. The course grade will be calculated as follows:

Homework assignments: 20%
Quizzes: 50%
Final exam: 30%

Top three scored students will be awarded at the end of the semester.