

Course Title

Geometry A

Description of Target Group

This course is for all students who have successfully completed Algebra A/B or have demonstrated comparable proficiency.

Purpose

The purpose of Geometry A is to provide an understanding of the basic structure of geometry, including inductive reasoning, informal proofs, deductive reasoning and geometric figures. Development and use of axioms, postulates, and theorems in the solution of problems will be stressed. A study of congruent triangles is included in this course. This is the first semester of a one year course.

Standards of Expected Student Achievement

Upon completion of this course, students will be able to successfully demonstrate the following skills:

1. Visualize situations geometrically.
2. Analyze figures and situations.
3. Use informal deduction as the first stage of formal proofs.
4. Use deduction and development of a formal proof in problem solving.
5. Possess a sophisticated understanding of mathematical methods and the ability to generalize concepts without reference to concrete interpretations.

Instructional Materials

Text and Supplementary Materials

Refer to: Secondary Adopted Texts and Approved Supplementary Books Used in the Santa Maria Joint Union High School District

Activities

1. Individual work
2. Lectures
3. Class participation
4. Demonstrations
5. Drills
6. Build a portfolio
7. Small group activities
8. Audio-visual materials
9. Outside resource people

Geometry B

Description of Target Group

This course is for all students who have successfully completed GEOMETRY A or demonstrated comparable proficiency.

Purpose

The purpose of Geometry B is the study of polygons, circles, the volumes of solids, the Pythagorean theorem, sines, cosines, and tangents. Basic constructions are given in a pattern of development. Theorems in coordinate geometry allow alternative methods of proof. This is the second semester of a one year course.

Standards of Expected Student Achievement

Upon completion of this course, students will be able to successfully demonstrate the following skills:

1. Solve problems and prove theorems involving circles, angles, areas, and right triangle trigonometry.
2. Solve problems involving constructions and loci.
3. Use coordinate geometry in solving problems and proving theorems.
4. Compute areas of polygons and circles.
5. Compute areas and volumes of solids.

Instructional Materials

Text and Supplementary Materials

Refer to: Secondary Adopted Texts and Approved Supplementary Books Used in the Santa Maria Joint Union High School District

Activities

1. Individual work
2. Lectures
3. Class participation
4. Demonstrations
5. Drills
6. Audio-visual materials
7. Build a portfolio
8. Small group activities
9. Outside resource people

