

Geometry Topics in 1st-8th grade at Toco Hills Home Tutoring

The following is a brief outline of topics covered. Because we have found that the study of Geometry is an integral component to the study of Arithmetic and Algebra, the three topics are frequently taught together.

Story of Geometry

Notes on Materials

Nomenclature

Charts

Activity cards

Congruency, Similarity and Equivalence

Metal Insets

Constructive Triangles

Further Exploration

Lines

Kinds of Lines

Positions of a straight Line

Positions of two lines in the same plane

Intersecting lines

Angles

Kinds of angles

Parts of angles

Measuring angles

Bisecting angles

Relationship between angles

Sensorial preparation for theorems of angles

Polygons

Concept

Triangles

Quadrilaterals

General Polygons

Work with compass and straight edge

Equivalent figures with Metal Insets

Sensorial approach

Triangle and rectangle

Rhombus and rectangle

Triangles

Trapezoid and rectangle

Decagon and rectangle

Reasoning approach

Pythagorean Theorem

Introduction

Sensorial presentation with isosceles triangle

Numerical study with scalene triangle

General proof with plate of Euclid's theorem

Pythagorean theorem applied to other regular figures with constructive triangles

Euclid's proof of Pythagorean Theorem

Area of Plane Figure

Concept of Area

Measurement

Notes on story problems

Parallelogram

Triangles

Square

Rhombus

Pentagon

Decagon

Formulas with metal insets of equivalent figures

The Circle

Nomenclature

Relationship between circle and straight line

Relationship between two circles

Circle as a regular polygon

Circumference

Area

Apothem and side of a regular polygon

Solids

Review of nomenclature

Basic concepts

Cross sections

Volume

Volume of non-rectangular prisms

Polyhedrons

Solids of rotation

Surfaces of solids

Measurement

Length

Volume

Temperature

Mass

Force

Time

Relationships Between Units