

# Geometry

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Students who are ready for **Geometry** have successfully completed **Pre-Algebra**. It is highly recommended that you also complete **Algebra I** as well

## Concepts and skills learned in the Geometry curriculum:

- Points, Lines, Rays and Line Segments
- Planes and Sets
- Angles
- Types of Angles
- Parallel and Perpendicular Lines with Midpoints and Bisectors
- Supplementary and Complementary Angles
- Transversals with Interior and Exterior Angles
- Perimeter of a Rectangle, Triangle, Parallelogram, and Trapezoid
- Area of a Rectangle, Triangle, Parallelogram, and Trapezoid
- Constructing and Identifying Triangles
- Regular Polygons
- Geometry of a Circle, Sphere and Ellipse
- Inscribed and Circumscribed Figures
- Area and Circumference of a Circle
- Area of an Ellipse
- Latitude and Longitude
- Volume of Rectangular Solid and Cylinder
- Volume of Pyramid, Cone, Prism, and Sphere
- Surface Area of Solids
- Radicals
- Pythagorean Theorem
- More on Radicals
- Special Triangles: (45°-45°-90°)
- Special Triangles: (30°-60°-90°)
- Axioms and Postulates
- Corresponding Parts of Triangles and Remote Interior Angles
- Proving Triangles Congruent with SSS and SAS
- Proving Triangles Congruent with ASA and AAS
- Proving Triangles Congruent with HL, LL, HA, and LA
- Proving Triangles Similar with AA and Proportion or Ratio
- Transformational Geometry
- Trigonometric Functions: Sine, Cosine and Tangent
- Inverse Trigonometric Functions: Secant, Cosecant, and Cotangent
- $\sin^2 + \cos^2 = 1$