

## Geometry

### **Points, Lines, Angles, and Planes – Unit 1 and Unit 2 in Iclasses or other**

Students find lengths and midpoints of line segments. They describe and use parallel and perpendicular lines. They find slopes and equations of lines.

### **Polygons – Unit 2 and Unit 6 in Iclasses**

Students identify and describe polygons and measure interior and exterior angles. They use congruence, similarity, symmetry, tessellations, and transformations. They find measures of sides, perimeters, and areas.

### **Quadrilaterals – Unit 5 in Iclasses**

Students identify and describe simple quadrilaterals. They use congruence and similarity. They find measures of sides, perimeters, and areas.

### **Triangles – Unit 3 in Iclasses or other**

Students identify and describe types of triangles. They identify and draw altitudes, medians, and angle bisectors. They use congruence and similarity. They find measures of sides, perimeters, and areas. They apply inequality theorems.

### **Right Triangles – Unit 4 in Iclasses or other**

Students prove the Pythagorean Theorem and use it to solve problems.

### **Right Triangle Trigonometry – Geometry A or B and independent project**

They define and apply the trigonometric relations sine, cosine, and tangent.

### **Circles – Unit 7 in Iclasses or other**

Students define ideas related to circles: e.g., radius, tangent. They find measures of angles, lengths, and areas. They prove theorems about circles. They find equations of circles.

### **Polyhedra and Other Solids - Geometry A or B and independent project**

Students describe and make polyhedra and other solids.

### **Polyhedras – Symmetry and Congruence - Unit 6 in Iclasses or other**

They describe relationships and symmetries, and use congruence and similarity.

### **Mathematical Reasoning and Problem Solving –**

#### **Attending Math Discussions Seminars and Geometry A or B**

Students use a variety of strategies to solve problems. Students develop and evaluate mathematical arguments and proofs.

### **Understand the History of Math - Independent Project**

Students research historical events related to geometry or people involved into its development.

### **Improve My Own Mathematical Writing Skills - Independent Project**

Students understand mathematical concepts and will explain their reasoning in journals and/or writing an essay on the development of concepts.