Geometry A:

Weeks 1, and 2—

Chapter 1 Tools of Geometry

1-1: Nets and Drawings
- Drawing activity with dot paper and blocks
- Using a net to create a solid figure

1-2: Points, Lines and Planes
- point, line, plane, segment, ray, opposite rays, collinear, coplanar, postulate, theorem, intersection
- using two sheets of paper to model the intersection of two planes
- definitions, pictures and personal description activity

1-3: Measuring Segments
- congruent segments, bisect, midpoint
- using a ruler to measure to the nearest 1/16 of an inch

1-4: Measuring Angles
- angle, side, vertex, degrees, congruent angles, angle addition, protractor
- using a protractor to measure an angle to the nearest degree

1-5: Exploring Angle Pairs
- adjacent, vertical, complementary, supplementary, angle bisector, linear pair

1-6: Basic Construction
- Constructing congruent segments
- Constructing congruent angles
- constructing angle bisector
- constructing a perpendicular bisector
- compass drawings

1-7: Midpoint and Distance Formula
- midpoint formula
- distance formula

1-8: Perimeter, Circumference and Area
- area and perimeter of square, triangle, and rectangle
- area and circumference of circle

Weeks 3 and 4:

Chapter 3 Parallel and Perpendicular Lines

3-1: Lines and angles
- parallel and skew lines, parallel planes, transversal, alternate interior angles, alternate exterior angles, corresponding angles, same side interior angles

3-2: Properties of Parallel lines
- postulates and theorems regarding angle relationships in parallel lines cut by a transversal

3-3: Proving lines parallel
- proving lines parallel using the converse of the postulates and theorems of the angle relationships

3-4: Parallel and perpendicular lines
- more theorems concerning parallel lines

3-5: Parallel lines and triangles
- triangle sum theorem, triangle exterior angle theorem and its use

3-7: Equations of lines in the coordinate plane
- slope intercept, point slope

3-8: Slopes of parallel and perpendicular lines
- parallel lines have equal slopes, perpendicular lines have opposite reciprocal slopes

Weeks 5 and 6:

Chapter 4 Congruent Triangles

4-1: Congruent Figures
- congruent polygons, determining corresponding parts

4-2: Triangle Congruence by SSS and SAS
- Side Side Side postulate, and Side angle side postulate

4-3: Triangle Congruence by ASA and AAS
- Angle side angle postulate and angle angle side postulate

4-4: Using Corresponding parts of congruent triangles
- proving parts of triangles are congruent

4-5: Isosceles and Equilateral triangles
- isosceles triangle theorem and its converse, base, base angle, vertex, leg, equilateral

4-6: Congruence in right triangles
- hypotenuse, leg, hypotenuse leg theorem

4-7: Congruence in overlapping triangles
- identifying congruent triangles from overlapping images and shapes

Weeks 7 and 8:

Chapter 5 Relationships Within Triangles

5-1: Midsegments of triangles
- midsegment of a triangle, triangle midsegment theorem

5-2: Perpendicular and angle bisectors
- equidistant, perpendicular bisector theorem and its converse, angle bisector theorem and its converse

5-3: bisectors in triangles
- concurrent, point of concurrency, concurrency of perpendicular bisector theorem, concurrency of angle bisectors theorem

5-4: medians and altitudes
- median, altitude, centroid, concurrency of altitudes theorem, orthocenter

5-6 and 6-7: triangle inequalities
- triangle inequality theorems and their converses

Weeks 9 and 10:

Chapter 6 Polygons and Quadrilaterals

6-1: Polygon angle sum theorems
- polygon angle sum theorem, interior angle measure, exterior angle sum,

6-2: Properties of parallelograms
- parallelogram, opposite sides and angles, consecutive angles,

6-3: Proving a quadrilateral is a parallelogram
- using properties of parallelograms to prove that a quadrilateral is a parallelogram

6-4: Properties of rhombuses, rectangles, and squares
- rhombus, rectangle, square, diagonals

6-5: Conditions for rhombuses, rectangles and squares
- using theorems to prove quadrilaterals are rhombus, rectangle or square

6-6: Trapezoids and kites
- trapezoid, base, leg, base angles, isosceles trapezoid, midsegment, quadrilateral chart

Week 11:

Chapter 7 Similarity

7-1: Ratios and Proportions
- ratio, proportion, extended ratio, cross product, properties of proportions

7-2: Similar Polygons
- similar, angle, proportion

7-3: Proving Triangles Similar
- angle angle, side side side, side angle side

7-5: Proportions in triangles
- similar figures are proportional

Week 12:

Review for Final exam and Final exam