# Study Guide Part II

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**Introductory Geometry (Chapter 11)**
- Be able to draw different types of figures along with naming polygons
- Identify the level of student understanding according to the van Hiele Theory of Geometric Development
- Find missing angles within different polygons
- Convert measurements in both metric and English systems.
- Students will find missing angle measures in a variety of polygons
- Students will explain how to determine missing angle measures when parallel lines are cut by transversals.
- Use the correct names and symbols for segments, rays, lines, and angles
- Draw a network given an floor plan
- Students will determine if a network is traversable and if it forms an Euler circuit

   Recommended Practice Problems:
**Chapter 11 Review pp. 698-700  #1, 9, 13.a, 26, 27, 32, 33**

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**Constructions, Congruence, and Similarity (Chapter 12)**
- Explain why triangles are congruent or similar.
- Construct triangles with given side lengths and angles using compass and ruler.
- Construct incircle or circumcircle for a triangle.
- Apply the properties of quadrilaterals (See p. 727) to determine the type of shapes that fit a set of conditions.
- Students will find the equation of a line passing through given points.
- Students will find missing side lengths of similar triangles from story problems

   Recommended Practice Problems:
**Chapter 12 Review pp. 765-767 #1, 9, 11, 15, 17**

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**Motion Geometry & Tessellations (Chapter 13)**

- Create reflection symmetry and point symmetry
- Describe the four rigid motions
- Find and describe the image under each rigid motion
- Students will describe why some polygons do tessellate a plane while others do not.

   Recommended Practice Problems:
**Chapter 13 Review pp. 824-826 #3, 6, 13 a & b**

**Measurement (Chapter 14)**

- Know and apply the measurement process
- Determine the area of rectangles, triangles, parallelograms, trapezoids, circles, and figures made up of a combination of these shapes
- Use the relationships of the Pythagorean Theorem and its converse
- Estimate the measurement using benchmarks
- Calculate volume of a solid
- Calculate the surface area of a solid
- Convert measurements in our measurement system and the metric system
- Find the distance between points

Recommended Practice Problems:
**Chapter 13 Review pp. 917-920 #1.c, 16.b & the problems below**
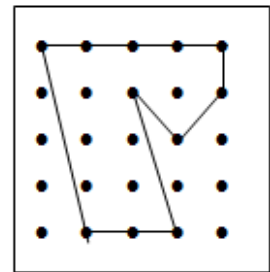
1) Complete the following:

a.  1.2 ml = _____ dl

b.  230 dag = _____ kg

c.  230,000 m$^2$ = _____ hm$^2$

d.  9,800 mm$^3$ = _____ cm$^3$

e.  75 in = _____ m

2) What type of triangle is formed: a right triangle, obtuse triangle, acute triangle?

(a) 17, 18, 13

(b) 26, 15, 20

3) What is the area of the polygon formed on the dot paper?



4) Create a polygon with five or more sides that has the same area.