**Test Notes**

**Geometry**

**Unit 4 – Congruent Triangles**

Congruent Figures

* Polygons are congruent when all angles and sides are congruent, in the same order
* Corresponding parts are listed in the same order of a congruence statement
* If two angles of one triangle are congruent to two of another triangle, the third angles are congruent

Triangle Congruencies

* The following are congruencies between two triangles
  + SSS, SAS, ASA, AAS
  + Right triangles have HL (Hypotenuse Leg)
* The following are NOT congruencies between two triangles
  + AAA, SSA
* Be able to utilize these to identify congruent triangles in figures
* If two triangles are not congruent be able to state what information could be needed to create a congruence

Corresponding Parts of Congruent Triangles are Congruent (CPCTC)

* Once two triangle are proven congruent any corresponding part can be used for other information

Isosceles and Equilateral Triangles

* Legs of isosceles triangles are congruent
* Base angles of isosceles triangles are congruent
* Theorems, if either of the above two is known, the other is also known
* Vertex angle bisector of an isosceles triangle is a perpendicular bisector of the base
* Equilateral triangles are equiangular
* Equiangular triangles are equilateral

Using CPCTC

* In more complex and overlapping triangles, common parts are congruent in each triangle
* Draw the triangles separately if necessary to see corresponding parts

There is one proof on the test