Assignment #2 – Verifying Properties of Triangles & Quadrilaterals

(A) **What**: Use analytical geometry skills to verify properties of triangles & quadrilaterals

(B) **Who**: You may work on your own or you will work with a partner of your choosing, subject to my approval (or I may simply assign you to a partner)

(C) **How**: I have pre-selected a number of questions from Nelson 10, Chapters 2.5 (Q4,1&6,2&7,9,10,11,12,13,14,15,16) and Nelson 10, Chap 2.7 (Q6,7,8 (see Q1-5),16,17). You and your partner are required to present a minimum of 4 solutions to these questions.

Triangles – Select one from:	Circles – Select one from:	Quadrilaterals #1 – Select one from:	Quadrilaterals #2 – Select one from:
Nelson 10, Chap 2.7 from Q8 or 17	Nelson 10, Chap 2.5 Q13 or from Nelson Chap 2.7, Q7	Nelson 10, Chap 2.5, Q4, 1&6, 2&7,9	Nelson 10, Chap 2.5, Q10,11,12,14

The solution requirements are:

a. Write out the question for which you are presenting a solution.
b. You should be VISUALIZING the problem. The first part of your solution will be to prepare a graph of the shape in question, either by hand, or by technology. I strongly recommend that you do the problem on Geogebra first. Either way, a graph MUST appear as part of your solution.
c. You must now PLAN how to work through the problem. The second item that MUST appear in your solution is your outline of a strategy showing what you need to do & how you plan on doing it.
d. You now need to CARRY OUT your plan. The third part of your solution will be your algebraic working out of your plan/strategy.
e. Now you need to CONCLUDE your work. The fourth part of your solution will be to present a conclusion & a justification of your question
f. These solutions will be presented on a poster, each solution on a separate sheet.

(D) **Grading:** I will grade ALL solutions you and your partner prepare and if you and your partner complete more than 4 solutions, I will record only the best 4 solutions

(E) **When**: You have two class periods to complete the solutions to the questions

Scoring Rubric – Verifying Geometric Properties

	Exemplary (10)	Proficient (8.5)	Developing (7)	Emerging (6)
Knowledge/Understanding **Key Question***: Are the mathematics of the solution done in an accurate and complete manner?*	• **All** aspects of your solution were complete, accurate, and consistent • Your solution was entirely accurate • **All** of your work, discussion and mathematical representations were **consistent** with one another and **relevant** to the task	• **All** aspects of your solution were complete and consistent • Your solution was essentially accurate • **Most** of your work, discussion and mathematical representations were **consistent** with one another and **relevant** to the task	• **Some** aspects of your solution were inconsistent, incomplete, or incorrect • The evidence for your solution was inconsistent or unclear • There were **some inconsistencies and errors** in your work, discussion and mathematical representations	• **Many** aspects of your solution were inconsistent, incomplete, or incorrect • You gave no evidence of how you arrived at your solution • There were **significant inconsistencies and errors** in your work, discussion and mathematical representations
Thinking/Problem Solving **Key Question***: Did the student use critical thinking and analytical skills?* **Key Question***: Did the student plan and carry out an effective strategy for solving the problem?*	• Your approach to the task was **insightful** • You confirmed that your solution was correct using alternate analytical algebra strategies	• Your approach to the task was **appropriate** • You confirmed that your solution was correct using technology	• You used an **oversimplified approach** to the task • You attempted to confirm that your solution was correct	• Your strategies were not appropriate for the task • You did not attempt to confirm that your solution was correct • Your reasoning and your work were inconsistent
Communication **Key Question:** *Did the student clearly, concisely, and completely convey meaning through various forms?* **Key Question***: Are the mathematics organized and presented in an accurate and complete manner?*	• **All** explanations and mathematical representations were clear, concise and complete • **The entire solution is** organized & presented in a clear, concise and complete manner	• **Most** explanations and mathematical representations were clear, concise and complete • **Most of the solution is** organized & presented in a clear, concise and complete manner	• **Some** explanations and mathematical representations were clear, concise and complete • **At times, the solution is** organized & presented in a clear, concise and complete manner	• Your explanations and mathematical representations were **often unclear, incomplete or redundant** • **Rarely is the solution is** organized & presented in a clear, concise and complete manner

Name: _____ Knowledge: /10 Thinking: /10 Communication: /10

Block: ____ Total Score: /30