HONORS GEOMETRY

BLIZZARD BAG ASSIGNMENT #1

NAME:_____

DIRECTIONS: Print this assignment on a sheet of paper. Then answer the following question showing ALL appropriate work!

Question #1: Draw a quadrilateral ABCD. Try to draw your quadrilateral so that no two sides are congruent, no two angles are congruent, and no two sides are parallel. Use a straight-edge to do this, as it should be done very neatly...

a. Let P, Q, R, and S be the midpoints of the sides AB, BC, CD, and DA, respectively. Use a ruler to locate these midpoints as precisely as you can. Join the points P, Q, R, and S to form a new quadrilateral PQRS. What do you notice about the quadrilateral PQRS? Make a conjecture about PQRS...

b. Now, based on what you did in part (a), use the coordinate plane below to try to prove your conjecture that you stated above. You can choose any four points to start and you can use the distance, midpoint, and slope formulas to help prove your conjecture ...