Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: 03/18/14

Geometry Period 5 Ms. Wilson

**Coordinate Geometry Proofs Assignment – Due Friday 3/21**

**What you NEED to KNOW:**

* **Scalene Triangle:** No congruent sides
* **Isosceles Triangle:** 2 congruent sides
* **Equilateral Triangle:** 3 congruent sides
* **Right Triangle:** One right angle (One Pair of Perpendicular Lines)



**What you NEED to USE:**



1. Prove that quadrilateral A(1,2), B(2,5), C(5,7) and D(4,4) is a parallelogram.



1. Quadrilateral *ABCD* has vertices , , , and . Prove that *ABCD* is a parallelogram but *not* a rhombus. [The use of the grid is optional.]



1. Quadrilateral *ABCD* has vertices A(-5,-1), B(-4, 3), C(8,0) and D(7, -4). Prove that *ABCD* is a rectangle, not a square. [The use of the grid is optional.]



1. Jim is experimenting with a new drawing program on his computer. He created quadrilateral *TEAM* with coordinates , , , and . Jim believes that he has created a rhombus but not a square. Prove that Jim is correct. [The use of the grid is optional.]



1. The vertices of quadrilateral *BIRD* are *B*(–1,–3), *I*(8,0), *R*(3,5), and *D*(0,4). Prove by means of coordinate geometry that quadrilateral *BIRD* is an isosceles trapezoid.



1. Quadrilateral *KATE* has vertices  , , and .

*a)* Prove that *KATE* is a trapezoid. [The use of the grid is optional.]

*b)* Prove that *KATE* is *not* an isosceles trapezoid.

