Date: Title:

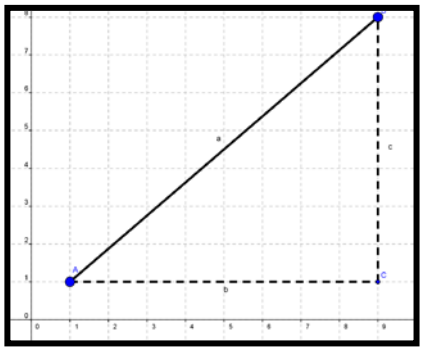
(A) **Fast Five**

- Review the definitions of the following quadrilaterals (tell what is true about their sides & angle relationships and be able to draw each one)
  - Line Segment
  - Rectangles
  - Squares
  - Parallelograms
  - Rhombuses
  - Trapezoids
  - Kite

- Review the following key TOOLS that you have ➔
  - How do you find the slope of a line if you have 2 points?
  - How do you KNOW if two lines are parallel?
  - How do you KNOW that two adjacent lines meet at a right angle?
  - How do you find the length of a line segment in co-ordinate geometry?

(B) Lesson Objectives

- We will apply our knowledge gained from studying linear functions to studying types of & the properties of quadrilaterals



(C) New Skill

- To find the length of line segment in a Cartesian plane, we simply use the Pythagorean Theorem as the length of segment between two points by drawing a right triangle on the line and calculating the change in y and the change in x, squaring each and summing.

(D) Explorations ➔ Use coordinate geometry skills to PROVE that the following points define the quadrilaterals indicated:

a. **Quad 1:** Use the points A(1,1); B(-3,3)C(-5,-1) D(-1,-3)
b. **Quad 2:** Use the points A(3,0); B(-5,4)C(-7,0) D(1,-4)
c. **Quad 3:** Use the points A(5,3); B(-5,5), C(-9,2) D(1,1)
d. **Quad 4:** Use the points A(5,3); B(1,5), C(-3,3) D(1,1)
e. **Quad 5:** Use the points A(3,6); B(-5,7)C(-9,2) D(6,0)
f. **Quad 6:** Use the points A(5,1); B(2,3), C(-1,1) D(2,-7)

- Internet resources : http://www.mathsisfun.com/quadrilaterals.html