**Using Ratios and Finding Distance Project**

**50 points**

**Due Thursday, 09/07/17**

**Step 1**: Choose a rectangular shaped object around your home. Ex: door, bed, TV, laptop screen, living room table, pillow, wall etc.

**Step 2**: Accurately measure both the length and the width of that object.

**Step 3:** Create a model or drawing of your chosen object with a 6:1 ratio. Ex: If you chose a wall in your house that was 6 feet tall and 10 feet wide (6’x10’), you would make the dimensions of your drawing 12 inches by 20 inches (12”x20”)

**Step 4**: Put a point on the upper right-hand corner of your model and name it “Point C”

**Step 5:** Put a point on the lower left-hand corner of your model and name it “Point D”

**Step 6**: Use the scaled down dimensions from step 3 to figure out the distance between Point C and Point D by using Pythagorean Theorem.

**Step 7**: Go back and measure the distance between the upper right-hand corner of the *original* object you measured (the door/bed/wall) and record the *actual* distance between those two points.

Does the hypotenuse of your original object when compared to your model, have a 6:1 ratio?

**Details you need for full credit:**

1. Dimensions of the *original* rectangle you measured **(5 points)**
2. Dimensions of your scaled down rectangle **(5 points)**
3. Point C and Point D labeled **(5 points)**
4. Segment CD cutting across your scaled down model in the correct location (which will also be your side “c” or hypotenuse when implementing the Pythagorean Theorem) **(5 points)**
5. An accurate measurement of segment CD’s length found by using Pythagorean Theorem **(5 points)**
6. The distance between the upper right-hand corner of the *original* object you measured (the door/bed/wall) **(5 points)**
7. The length, width and distance should hold the 6:1 ratio **(10 points)**
8. **Get creative- Put forth effort. Make your model look nice.** It doesn’t have to be on a piece of paper, you can put it on a poster board, or whatever else you want. **(10 points)**