**Section Title: 1.1 Rectangular Coordinates**

**Objective:** Students will plot points in the Cartesian Plane, use Distance Formula, Midpoint Formula, coordinate plane with 85% accuracy.
 **TEKS: 2F**

**Lesson Introduction:** Mathspace investigation activity (have to know distance slope and midpoint formulas first)

**Historical:** Facts about the Coordinate Plane: René Descartes was a mathematician and philosopher from France who developed the Cartesian coordinate in 1637. The idea was also taken from the independent work of Pierre de Fermat.

The usage of a single axis was employed by Descartes or even Fermat. The usage of a pair of axes was employed after Frans van Schooten and his students translated the book of Descartes’ La Géométrie. There are various types of coordinate systems which have been developed after the work of Descartes. Those include cylindrical coordinates and polar coordinates.

**Materials/Procedures:**

Powerpoint – 25 slides; example slides added

**Examples**:

example 2 – scatterplot;

ex 4, 8

pg 5 Verifying a right triangle (5,7), (2,1), (4,0)

#7, 10, 17, 23 (is it a right triangle?),

29 (plot, midpoint, distance) **Evaluation:**

CP - Homework – pg 8 #3-30 by 3

H – Homework – pg 8 #9-42 by 3

**Key Academic Vocabulary:** origin, quadrant, ordered pair, scatterplot, distance formula, right triangle, midpoint, translation **Time to complete:**

CP – 1.25 days

Day 1 – slide 13

Day 2 – finish; work time on 1.1

H – 1 day

Day 2 – review problem set; give work time

**Mathspace:**

Texas 7: 3.05 – coordinate plane; 3.08 – graphing lines

Texas Geo: 1.03 – midpoint, 1.02 – distance, Nice investigation activity with slope, distance, midpoint