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| **OBJECTIVES** (Polar Coordinates, Section 6.4, Pages 479 – 485) |
| * Identify the major parts of the polar coordinate system: the Pole, Polar Axis, and Polar points in the form (r, *θ*).
 |
| * Understand that the Polar point (*r, θ*) has the coordinate *r,* which is the distance from the Pole and the coordinate *θ,* whichis an angular measure, either in degrees or radians.
 |
| * Understand that *(x, y)* is a Rectangular (Cartesian) point.
 |
| * Plot points in the Polar coordinate system.
 |
| * Be able to convert from (*r, θ*) to *(x, y)* by using x = rcos *θ* and y = rsin *θ.*
 |
| * Be able to convert from *(x, y)* to *(r, θ)* by using r = ±√ (x2 + y2) and *θ* = tan-1(y/x).
 |
| * Graph and identify the Common Polar Curves.
 |
| * Use a TI84+ calculator to graph polar functions.
 |
| * Convert a polar equation to rectangular form.
 |
| * Convert a rectangular equation to polar form.
 |
| * Find the distance between 2 polar coordinates by using The Law of Cosines.
 |
| **The Polar Coordinate System** consists of a ray known as the Polar Axis and the endpoint of the ray, called the Pole. |

**TUESDAY (4.1.25)**

**Do you have any questions about the work assigned previously?**

* ***Graphing Polar Points\_\_Polar to Cartesian\_\_Cartesian to Polar (***Handout from 3.25.25.)
* Page 507 (#54 – 72, evens).
* Page 492, ***Exercises***, #3 – 6.
* Discuss the E-Learning Day Assignment: Replicate the designs using your TI-84 and learn the names of the polar designs that you will read about here! Polar Equations and Their Graphs. [**https://jwilson.coe.uga.edu/EMT668/EMAT6680.2003.fall/Shiver/assignment11/PolarGraphs.htm**](https://jwilson.coe.uga.edu/EMT668/EMAT6680.2003.fall/Shiver/assignment11/PolarGraphs.htm)

 **Take-Home Quiz: Graph the 2 following graphs on the same Cartesian plane for *0 ≤ θ ≤ 2π.*** Due at the beginning of your Thursday class period. Label the *x* and *y* intercepts with their Cartesian coordinates.

***r1 = -***$\sqrt{0.5θ}$

***r2 =*** $\sqrt{0.5θ}$

**Homework: Polar System Review**

**THURSDAY (4.3.25)**

**Turn in your Take-Home Quiz.**

**Discuss the Polar System Review.**

**Homework: Study for the Polar System Test to be taken on Tuesday, April 8.** You may use your notes on 2 sheets of paper, 8.5 by 11 inches, front and back.

**FRIDAY (4.4.25) A-DAY, NO CLASS**