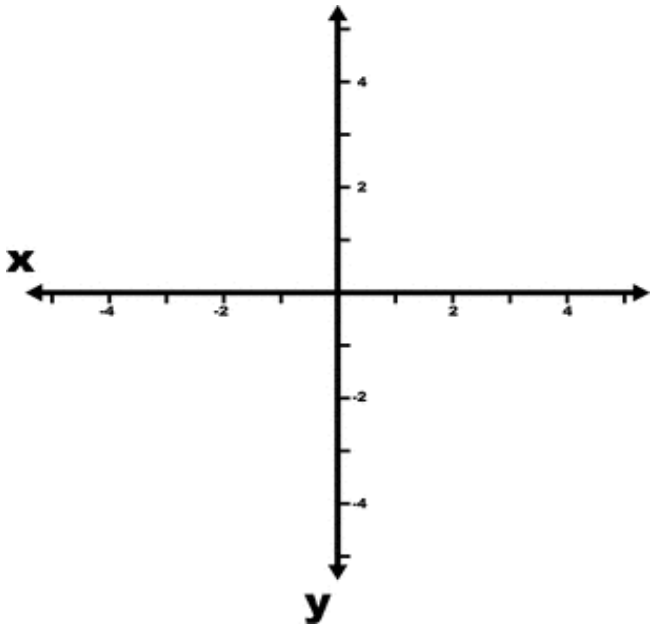
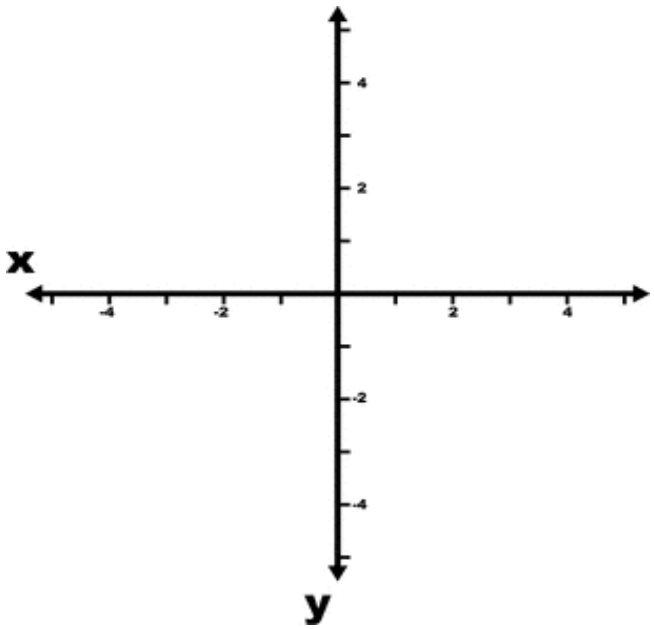
Unit #4: Parametric and Polar Equations
Topic: Finding the Intersections of Polar Graphs
Objective: SWBAT find the points of intersection of a pair of polar graphs.

Since each point in the plane has multiple representations in polar coordinates, solving for the points of intersection of two polar curves may require more than solving an equation.

Example #1:
Find and graph the points of intersection of $r = sin\theta$ and $r = 1 + 2sin\theta$.

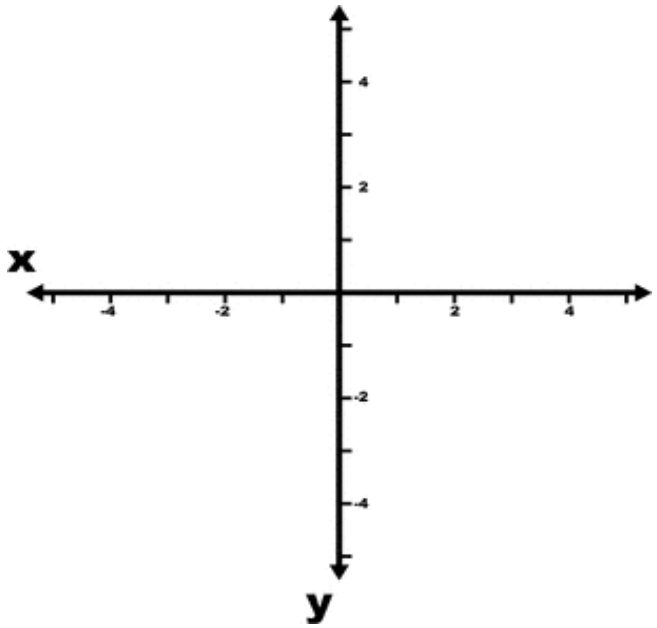


Example #2:
Find and graph the points of intersection of $r = 2sin\theta$ and $r = 2 + 2cos\theta$.

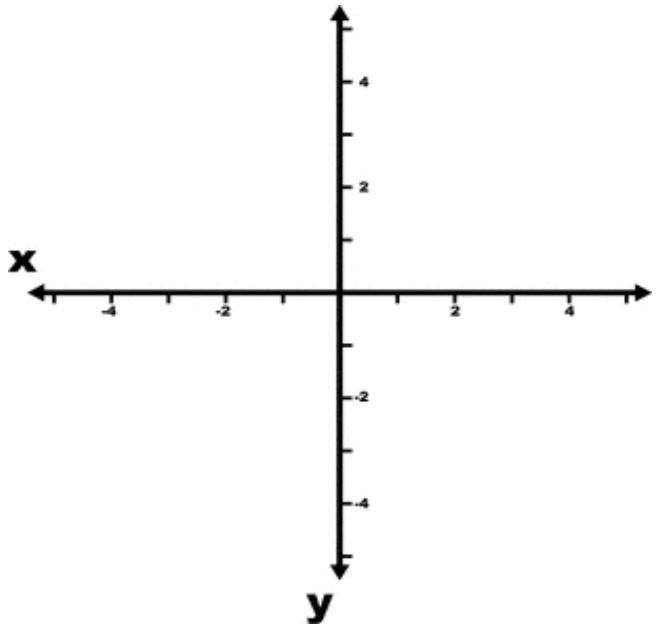


Problem Set #5: Find and graph the points of intersection for each of the following equations.

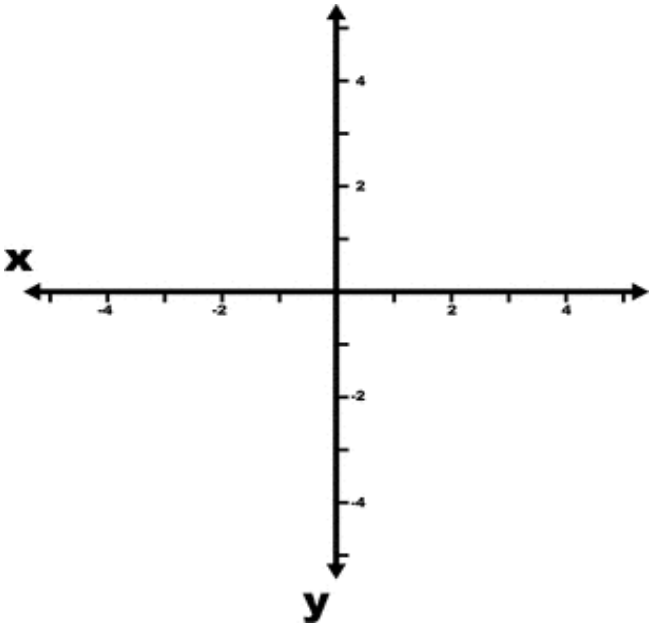
1) $r = 3cos\theta$
$r = 2 - cos\theta$



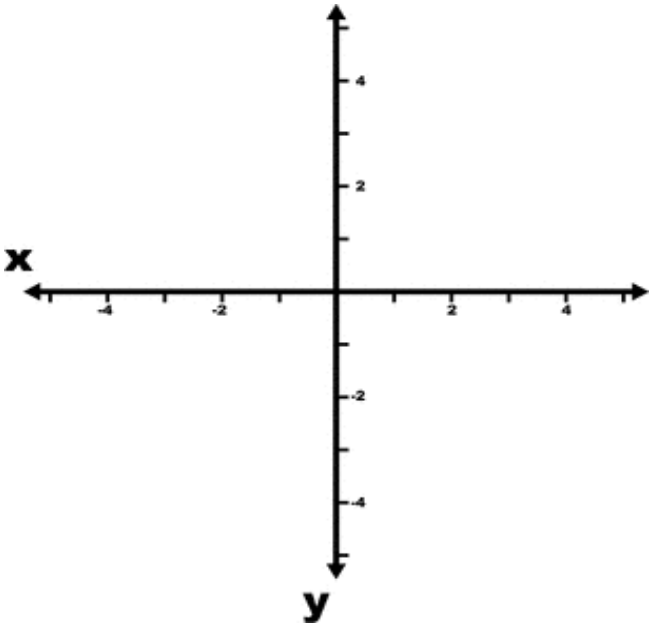
2) $r = 4sin\theta$
$r = 4 - 4sin\theta$



3) $r = 2cos\theta$
$r = 2 + 2sin\theta$



4) $r = 2(1 - cos\theta)$
$r = 2cos\theta$



5) $r = 3$
$r = 6cos2\theta$