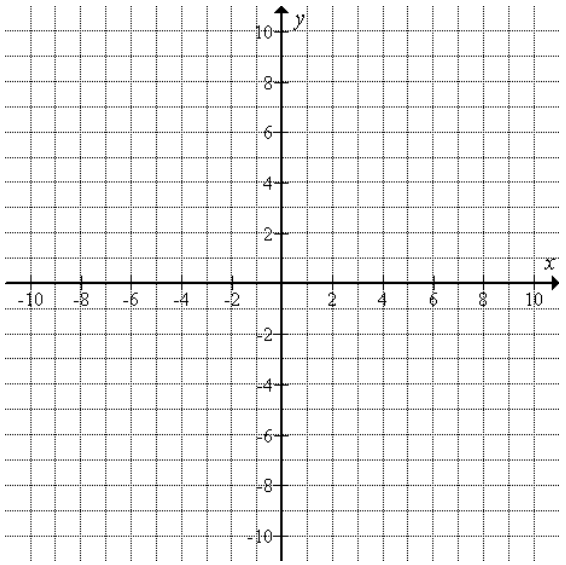
Name: _____ *Period:* ____

Sheet #110. Circles and Ellipses: Implicit and Parametric

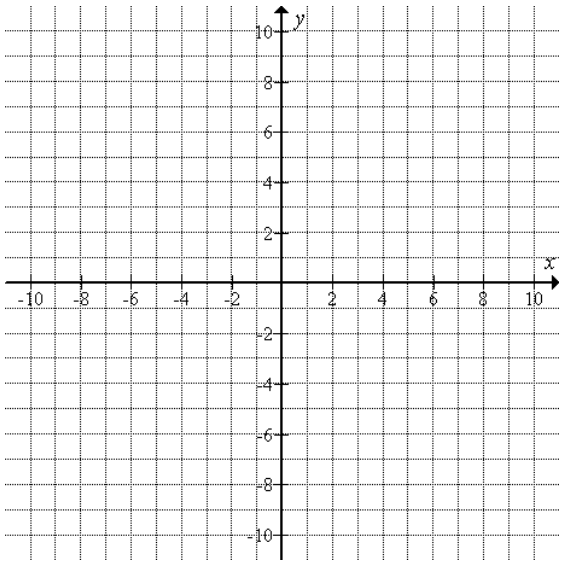
To eliminate t*, rewrite using* $\sin^2 t + \cos^2 t = 1$.
Implicit equation is in terms of x *and* y *only (see **E**).*

A-B. Graph and write implicit formula (eliminate *t*).
Find center (*h*, *k*) and radius, *r*.
A. $x = 4 + \cos t$, $y = -5 + \sin t$.



B. $x = 1 - 2\cos t$, $y = 6 + 2\sin t$.

C-D. Graph and write implicit formula. Find and **mark these points on the graph:** center, vertices, and co-vertices.
C. $x = 9\cos t$, $y = 5\sin t$.



D. $x = 3 - 2\sin t$, $y = -1 + 3\cos t$. *Careful with vertices*

E. Write this implicit equation in parametric form using *t*. Graph it. Find and **mark these points on the graph:** center, vertices, and co-vertices.

$$\frac{(x-2)^2}{16} + \frac{(y-3)^2}{25} = 1$$