Sheet #121 Name: _____ Period: ___

IMPLICITLY DEFINED CONIC SECTIONS

Use NOTES, WORKBOOK, etc.

Use TI-83 for calculations, not graphing

These formulas may be useful:

$(X-H)^2+(y-k)^2=R^2$ $\quad (X-H)^2/a^2+(y-k)^2/b^2=1$

$(y-k)^2=4p(X-H)$ $\quad c^2=a^2-b^2$

$d=\sqrt{\Delta X^2+\Delta y^2}$

$X=r\cos\theta$

$y=r\sin\theta$

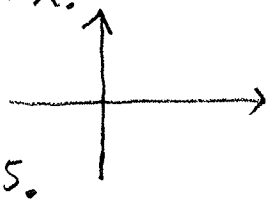
$\cos^2\theta+\sin^2\theta=1$

1. FIND THE DISTANCE BETWEEN $P(1,2)$ AND $(-2,6)$.

(1) DISTANCE = _____

2. a) SKETCH. b) IDENTIFY $y^2=8x$. (2a)

DON'T PUT UNITS ON AXES.



(2a) SKETCH

(2b) NAME OF SHAPE: _____

3. FIND THE RADIUS OF $X^2+y^2=5$.

(3) RADIUS: _____

4. a) SKETCH THE CURVE b) FIND THE LENGTHS OF THE SEMI-MAJOR & SEMI MINOR AXES, AND FOCAL LENGTHS

$\frac{X^2}{64}+\frac{y^2}{16}=1.$

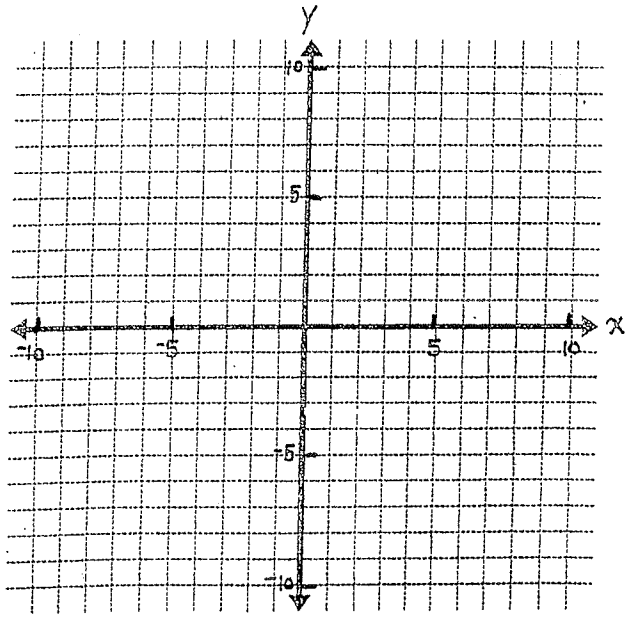
(4b) SEMIMAJOR AXIS = _____

SEMIMINOR AXIS = _____

FOCAL LENGTH = _____

(EXACT, NO DECIMALS)

(4b & 5a) →



(4b) SKETCH

(5a) GRAPH

5. a) GRAPH (ABOVE) THE CURVE OF THE CIRCLE THAT HAS RADIUS OF 3 AND CENTER AT $(6,-5)$.

b) FIND THE EQUATION OF THE SAME CIRCLE

(5b) EQUATION = _____

6. SHOW THAT $X=2\cos\theta$, $y=2\sin\theta$ IS A CIRCLE OF RADIUS 2.