Name: _____ Per: _____ Date: _____

Serafino ▪ Precalculus S2

9R Conic Sections Review

1. Graph the Conic Section & State the Requested Info:

a. $(y+4)^2 = 8(x+3)$

Vertex:

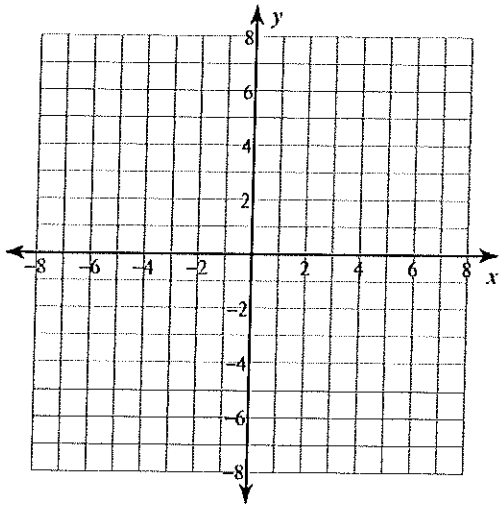
Focus:

Focal width:

Points on focal width:

Directrix:

AOS:



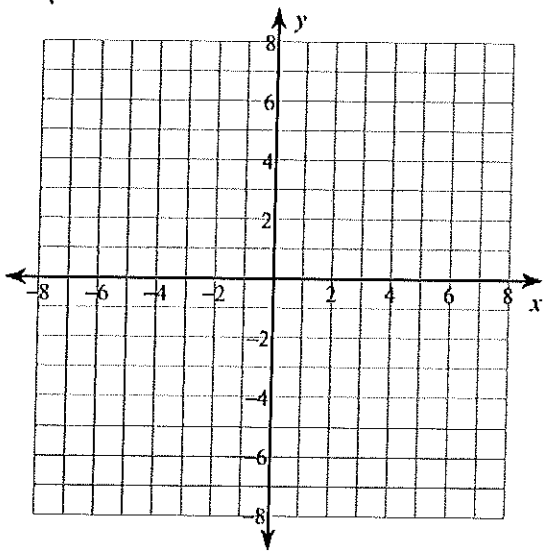
b. $x^2 + y^2 + 10x - 2x + 11 = 0$

↙ Typo. meant to say $-2y$.

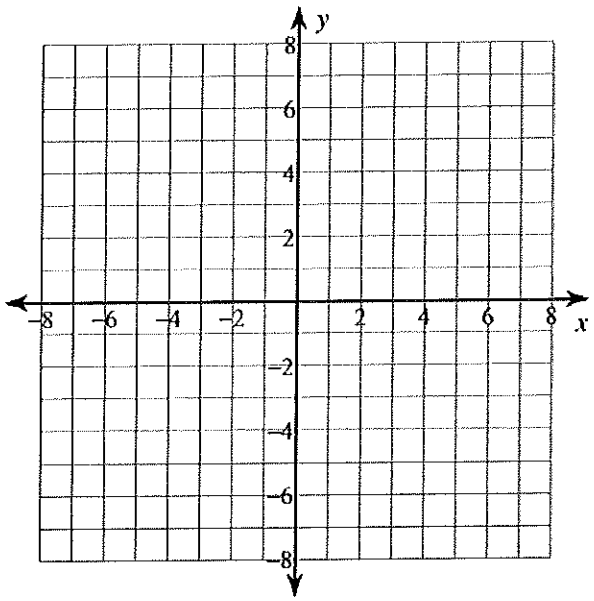
Standard Form:

Center:

Radius:



c. $\frac{(x-1)^2}{4} - \frac{(y-2)^2}{36} = 1$



Center:

Vertices:

Points on CA:

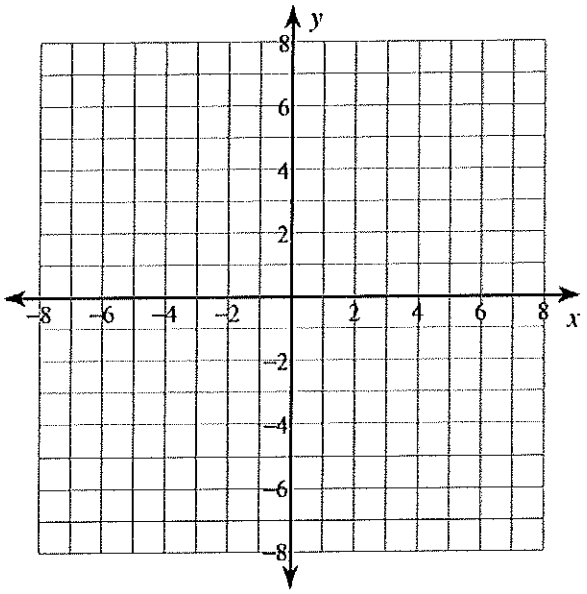
Foci:

TA length:

CA length:

Asymptotes:

d. $(x-1)^2 + \frac{(y+2)^2}{4} = 1$



Center:

Vertices:

Covertices:

Foci:

Maj. Axis length:

Min. Axis length:

2. Write the equations of the following conic sections:

a. Ellipse; Center (5, –2), Vertex (9, –2) and minor axis of length 6

b. Hyperbola; Center (–7, 6), transverse axis (TA) length 10, and Focus (–7, –1)

c. Circe; Endpoints of diameter are (–9, 8) and (3, 12)

d. Ellipse; Center (0, –4), Vertex (0, 2) and Focus (0,–1)

e. Parabola; Vertex (–4, –9) and directrix $x = -1$

f. Parabola; Vertex (3, 6) and Focus (3, 9)

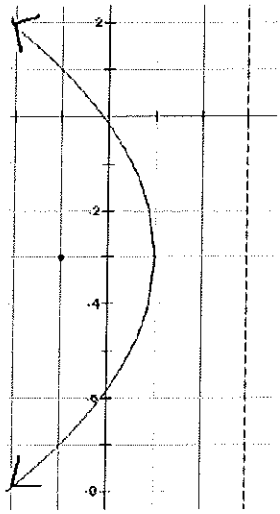
g. Hyperbola; Center (–2, 3), Vertices (–2, 9) and (–2, –3), and Foci (–2, 11) and (–2, –5)

h. Hyperbola; Vertices (–5, 5) and (5, 5) and foci (–7, 5) and (7, 5)

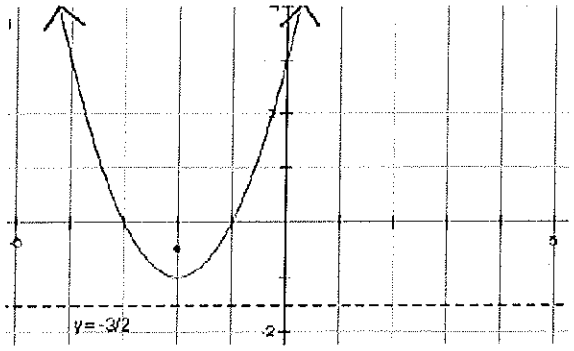
i. Write the equation for a parabola with focus (–1, 5) and directrix $y=1$

3. Write the equations of the following graphs:

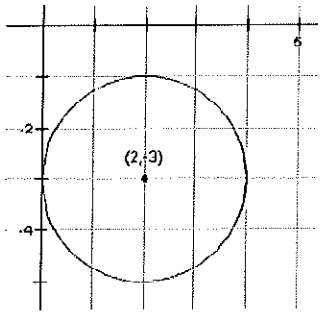
a.



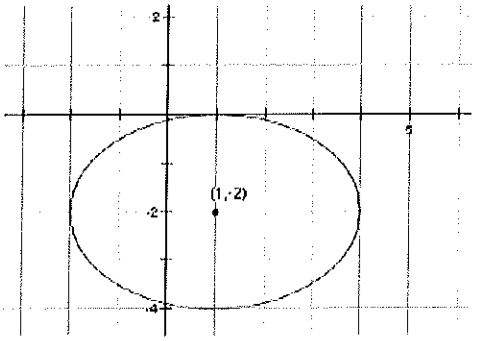
b.



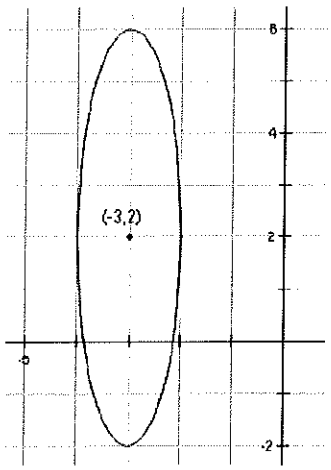
c.



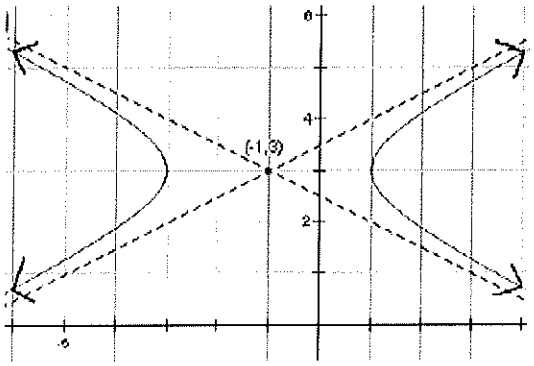
d.



e.



f.



g.