Name: _____ Per: _____ Date: _____

Serafino • Precalculus S2

9PT Conic Sections Practice Test

Writing equations & identifying critical info

1. Write the equation for each of the following.

a. A parabola with focus (–4, –9) and directrix x = 6

b. A circle with endpoints of the diameter (–7, –3) and (–5, 5).

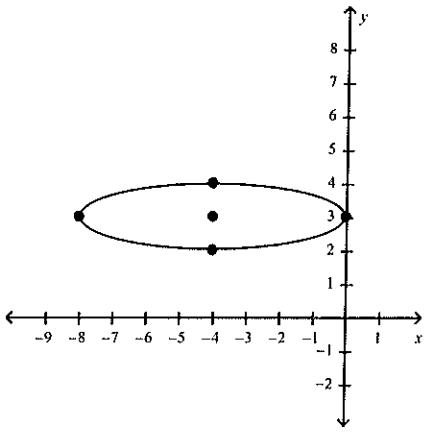
c. An ellipse with center (–1, 2), focus (–3, 2), and vertex (–5, 2).

d. An ellipse with foci (2, 3) and (2, 7) and minor axis of length 6.

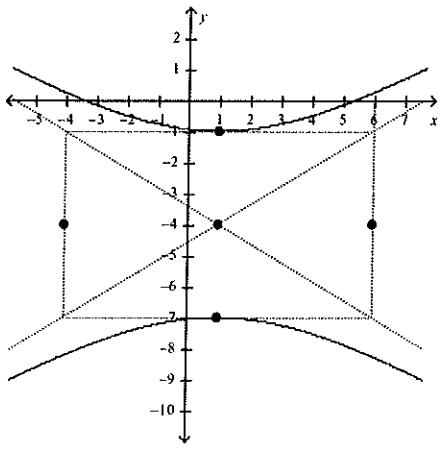
e. A hyperbola with vertices (2, 9) and (2, 3), and foci (2, 10) and (2, 2).

2. Write the equation of the conic section, given the graph:

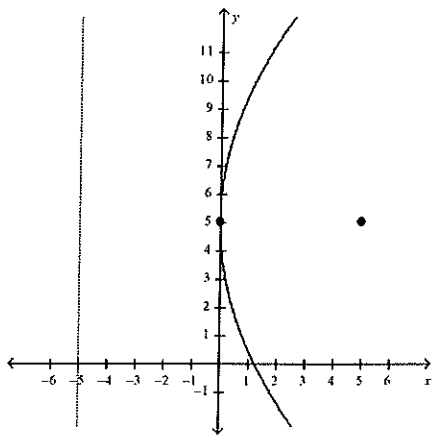
a.



b.



c.



3. Give the critical info, according to the conic

a. $(y-1)^2 - \frac{(x-3)^2}{4} = 1$

Left/Right Up/Down Center: _____ TA length: _____ CA length: _____

Vertices: _____ Covertices: _____ _____

Foci: _____ Asymptotes: _____

b. $\frac{(x-3)^2}{4} + (y-8)^2 = 1$

Horizontal Vertical Center: _____ Maj. Axis length: _____ Min. Axis length: _____

Vertices: _____ Covertices: _____

Foci: _____

c. $(y-4)^2 = -20(x+1)$

Opens: _____ Focal width: _____ Vertex: _____ Focus: _____

Points on focal width: _____ Directrix: _____ Axis of Symmetry: _____

d. $x^2 + y^2 + 4x + 12y + 36 = 0$

Standard Form: _____

Center; _____ Radius: _____