Algebra 2

Conics Review

Name_____ Period_____

1. Write an equation for the circle with center and radius 8.

2. What is the center and radius of ?

3. If , what is the focus? What is the equation of the directrix?

4. A parabola has its vertex at the origin and its focus at (7, 0). What is its equation?

5. A parabola has equation . Graph it and find the focus.

6. An ellipse is centered at the origin and has foci on the y-axis. Its major axis is 26 units long and its minor axis is 10 units long. What is the equation?

7. Graph ——— ——— and identify its center, vertices and foci.

8. Write in standard form and identify the foci.

9. Write in standard form.

10. What are the equations of the asymptotes of — — ?

11. A hyperbola is centered at the origin with foci and vertices at . What is the equation?

12. How do you tell whether a hyperbola is vertical or horizontal?

13. What are the foci and asymptotes of —— —— ?

14. Identify what type of conic each is, then find its center, vertices and foci.
    a) $4x^2 + 4y^2 - 24x + 40y - 108 = 0$
    b) $7x^2 - 5y^2 - 28x + 40y - 87 = 0$
    c) $3x^2 + 2y^2 - 18x - 8y + 23 = 0$
    d) $12x^2 - 48x - y + 53 = 0$