Review For U3 Test! Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Circles and Parabolas Test on Friday 9/20/13

1. What’s the equation of a circle with a center at (5, 2) and r = 8?

2. What’s the equation of a circle containing the points (3, 4) and has its center at (0, -1)?

3. A certain circle has endpoints of a diameter at (1, 4) and (-7, 4). What’s the equation of this circle?

4. If the vertex of a parabola is at (-3, 2) and its focus is at (-3, 4), what’s its equation?

5. Write the equation of a circle with a focus at (4, 2) and a vertex at (1, 2).

6. What’s the equation of a parabola with a directrix at *y* = -3 and a focus at (4, 1)?

7. The equation -3*x*2 = 60*y* is a parabola (but not in standard form). What are the coordinates of its focus?

8. *x*2 + *y*2 + 6*x* – 10*y* + 30 is an equation of a circle in general form. What’s is it’s center and radius?

9. What’s the equation to a line tangent to the circle *x*2 + *y*2 = 10, at the point (1, 3)?

 *Hint: Use point-slope form (y –y­1)=m(x – x1)*

10. At what points (if any) does the line $y=\frac{1}{3}x+\frac{20}{3}$ intersect the circle *x*2 + *y*2 = 80?

11. Solve the system of equation: 

12. A soccer ball has a diameter of about 10inches. Write an equation for a circular cross section that passes through the ball’s center. Assume that the center of the ball is at the origin.

13. A circle centered at the origin has an equation of 6*x*2 +6 *y*2 = 54. Graph this circle below.

14. The cross section of a telescope antennae is a parabola. The receiver is located at the focus of the parabola. If the vertex is at the origin, and the receiver is 12feet above the vertex, what is the equation for the parabola?

15. A circled centered at the origin has a radius of 5. The line y = 2 intercepts the circle as a chord. How long is the chord?

16. Three coordinate points of a parallelogram are,(4, 5) and (7, 5). Find the fourth vertex.