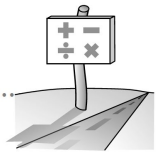
CW#____ Name:_____

3.1.3 Where do the curves intersect?

Solving Nonlinear Systems of Equations



#38 Solve the following system of equations algebraically. Give exact answers and be prepared to share your method with the class.

$$x^2 + y^2 = 34$$
$$y = x^2 - 14$$

#39 Work with your team to solve each of the following systems of equations algebraically. Give exact answers. If possible, verify graphically that you have obtained all of the correct solutions.

a.

$$xy = 6$$
$$x^2 + y^2 = 15$$

#39 Continued

b.

$$2x + y^{-5/2} = 6$$
$$3x - 2y^{-5/2} = -5$$

c.

$$2y^2 + x^2 + 9 = 0$$
$$y = x^2$$

d.

$$x^2 + y^2 = 74$$
$$x^2 - y^2 = 24$$