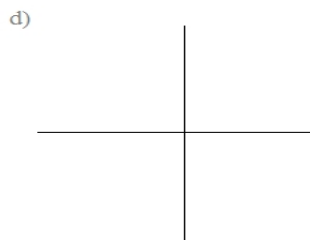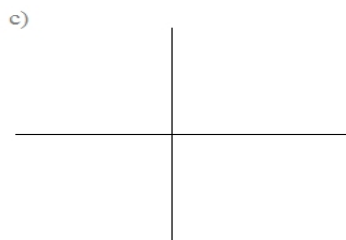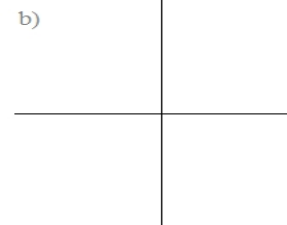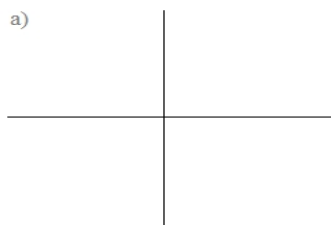4) sketch examples of the following systems:

    a) 2 conics; two solutions

    b) 2 conics; three solutions

    c) circle and ellipse; four solutions

    d) line and hyperbola; one solution

**e) 2 conics; eight solutions

a)

b)

c)

d)

e)
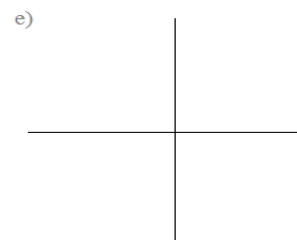
5) Solve the following system (algebraically).
Then, sketch the system and verify the solutions.

$$x^2 + y^2 + 8x = -15$$

$$9x^2 + 25y^2 = 225$$