

Math 90 – Quiz # 10

Name Key

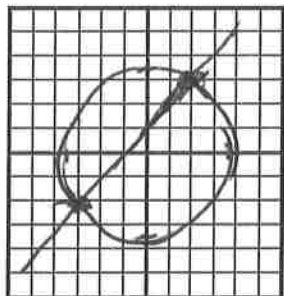
For the system of equations:

$$x^2 + y^2 = 13$$

$$y = x + 1$$

substitute

Solve the system algebraically, and graph the equations, showing the solution points.



$$x^2 + (x+1)^2 = 13$$

$$x^2 + x^2 + 2x + 1 = 13$$

$$\frac{2x^2}{2} + \frac{2x}{2} - \frac{12}{2} = \frac{0}{2}$$

$$x^2 + x - 6 = 0$$

$$(x+3)(x-2) = 0$$

$$x = -3, 2$$

$$\textcircled{1} x = -3$$

$$y = -3 + 1 = -2$$

$$(-3, -2)$$

$$\textcircled{2} x = 2$$

$$y = 2 + 1 = 3$$

$$(2, 3)$$