

OLAWUTI FAWAZ OLOLADE

MR OYELEH

MELHATRONICS ENGINEERING

MR OKUNLOLA

19/ENG05/052

$$1.) x^2 + y^2 - 5x - y + 4 = 0$$

$$x^2 + y^2 + 2gx + 2hy + 4 = 0$$

$$xx_1 + yy_1 + g(x+x_1) + h(y+y_1) + c = 0$$

$$c = 0$$

$$g = -\frac{5}{2}$$

$$h = -\frac{1}{2}$$

$$x_1 = 1$$

$$y_1 = 0$$

$$x + 0 + -\frac{5}{2}(x+1) + -\frac{1}{2}(y+0) + 4 = 0$$

$$x - \frac{5}{2}x - \frac{5}{2} - \frac{1}{2}y + 4 = 0$$

$$2x - 5x - 5 - y + 8 = 0$$

$$2x - 5x - y - 3x + 3 - y = 0$$

$$y = -3x + 3$$

$$\textcircled{2}. x^2 + y^2 - 12x - 12y + 47 = 0$$

$$x^2 + y^2 + 2ghx - 2hxy + c = 0$$

$$c = 47$$

$$g = -6$$

$$h = -6$$

$$x_1 = 1$$

$$y_1 = 0$$

$$xx_1 + yy_1 - 6(x + x_1) - 6(y + y_1) + c = 0$$

$$x + 0 - 6(x + 1) - 6(y + 0) + c = 0$$

$$x - 6x - 6 - 6y + 47 = 0$$

$$-5x - 6y + 41 = 0$$

$$6y = -5x + 41$$

$$y = \frac{-5x + 41}{6}$$

$$\textcircled{3}. x^2 + y^2 - 8x + 14y + 40 = 0$$

$$c = 40$$

$$g = -4$$

$$h = 7$$

$$x_1 = 1$$

$$y_1 = 0$$

$$xx_1 + yy_1 - 4(x + x_1) + 7(y + y_1) + 40 = 0$$

$$x - 4(x + 1) + 7y + 40 = 0$$

$$x - 4x - 4 + 7y + 40 = 0$$

$$-3x + 7y + 36 = 0$$

$$2y = 3x - 36$$

$$y = \frac{3}{2}x - \frac{36}{2}$$