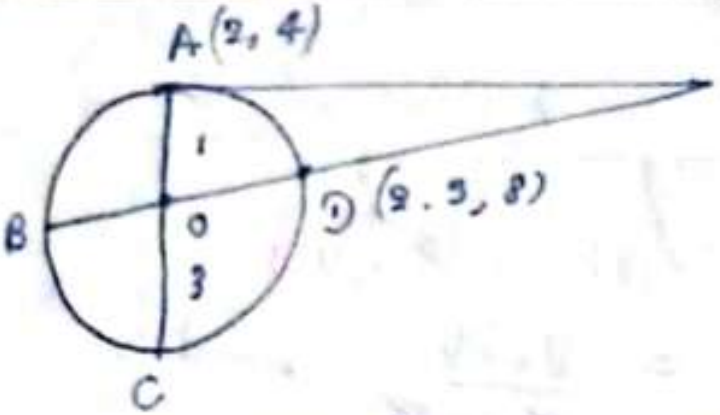


$$O_x = \frac{(2 \times 3) + (C_x \times 1)}{(3+1)} \qquad O_y = \frac{(4 \times 3) + (C_y \times 1)}{(3+1)}$$

$$3 = \frac{6 + C_x}{4} \qquad 5 = \frac{12 + C_y}{4}$$

$$12 - 6 = C_x \qquad 20 - 12 = C_y$$

$$C_x = 6 \qquad C_y = 8$$

$$C = (6, 8)$$

$$D = (2.5, 8)$$

Q=

$x^2 + y^2 + 2gx + 2fy + C = 0$

A C D sobre esa curva

$A = (2, 4)$

$4 + 16 + 4g + 8f + C = 0 \quad -(1)$

① = 2·5, 8

$6.25 + 64 + 5g + 16f + C = 0$ — ②

$C = (6, 8)$

$36 + 64 + 12g + 16f + C = 0$ — ③

③ − ①

① ⇒ $20 + 4g + 8f + C = 0$.

8.

② ⇒ $70.25 + 5g + 16f + C = 0$

③ ⇒ $100 + 12g + 16f + C = 0$

③ − ①

$80 + 8g + 8f = 0$

$g + f = (-10)$ — ④

② − ①

$50.25 + g + 8f = 0$

$g + 8f = (-50.25)$ — ⑤

⑤ − ④

$7f = -50.25 + 10 = -40.25$

$f = (-40.25/7) = (-5.75)$

$$g = -10 + \frac{40.25}{7} = \frac{40.25 - 70}{7}$$

$$g = (-4.25)$$

$$x^2 + y^2 - (8.5)x - (11.50)y + C = 0$$

$$20 + 4(-4.25) + 8(-5.75) + C = 0$$

$$20 - 17 - 46 + C$$

$$C = 43$$

$$\boxed{x^2 + y^2 - 8.5x - 11.5y + 43 = 0}$$

AE :)

$$xx_0 + yy_0 + g(x + x_0) + f(y + y_0) + C = 0$$

$$(x_0, y_0) = (2, 4)$$

$$2x + 4y + -4.25(x + 2) + -5.75(y + 4) + 43 = 0$$

$$(2 - 4.25)x + (4 - 5.75)y - 8.5 - 23 + 43 = 0$$

$$-2.25x - 1.75y + 11.5 = 0$$

$$\boxed{2.25x + 1.75y - 11.5 = 0}$$

0. $x^2 + 2x + y^2 + 4y + 1 = 0$

$y = (x-1) \qquad (g,-f) = (-1, -2)$

$x^2 + 2x + (x-1)^2 + 4(x-1) + 1 = 0$

$x^2 + 2x + x^2 - 2x + 1 + 4x - 4 + 1 = 0$

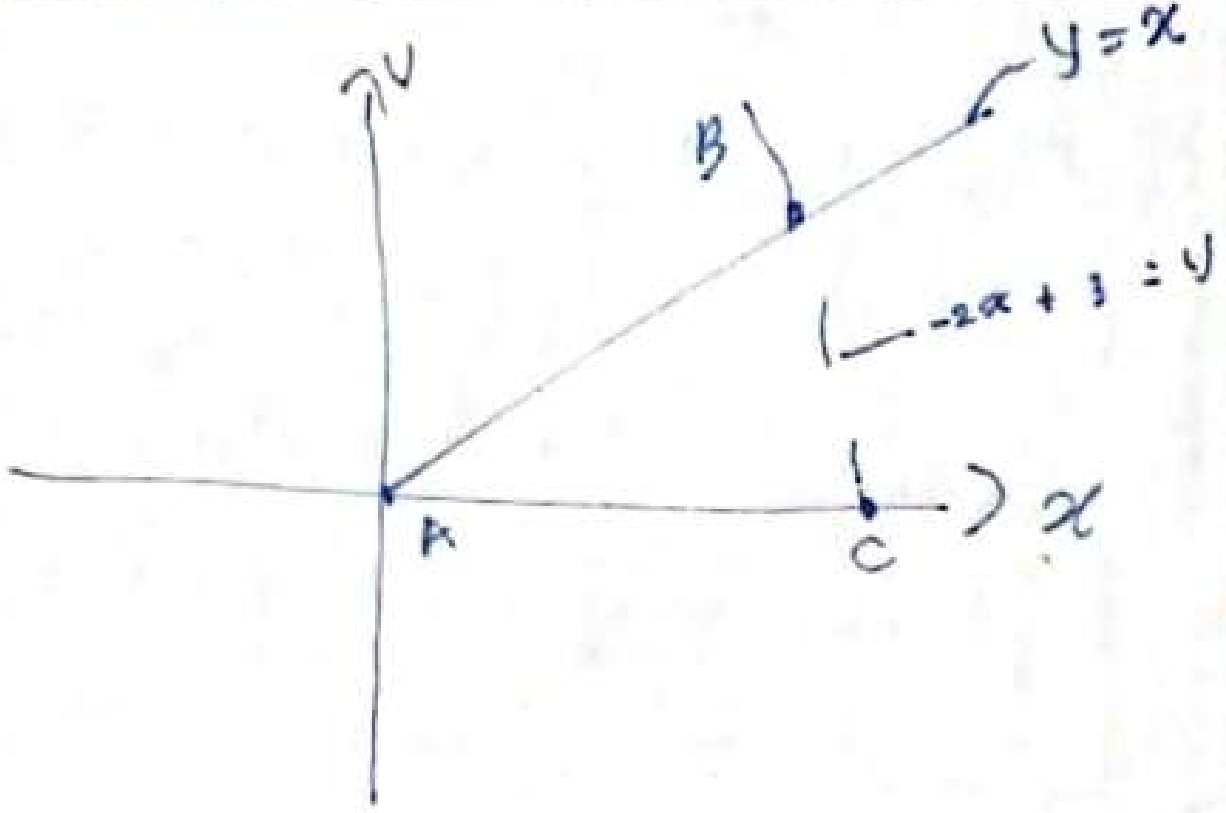
$2x^2 + 4x - 2 = 0$

$x^2 + x - 1 = 0$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-2 \pm \sqrt{1+4}}{2} \qquad x = \frac{-2 \pm \sqrt{5}}{2}$$

$A = (-1, -2)$



$y = x$ -①

$y = -2x + 3$ -②

② -①

$0 = -2x - x + 3$

$0 = -3x + 3$

$-3 = -3x$

$x = +1$

$y = +1$

$B = (1, 1)$

C ⇒ $-2x + 3 = y$ ($y \Rightarrow 0$)

$-2x + 3 = 0$

$x = 3/2$

$C = (3/2, 0)$

$A = (0, 0)$

~~$x_1, y_1 = 1, 1$~~ $x_1, y_1 = (0, 0)$

~~$x_2, y_2 = 3/2, 0$~~ $x_2, y_2 = (1, 1)$

$x_3, y_3 \{ 3/2, 0 |$

$$\frac{1}{2} \left| x_1(y_2 - y_3) + x_2(y_3 - y_1) + x_3(y_1 - y_2) \right|$$

$$\frac{1}{2} \left| 0(1 - 0) + 1\left(\overset{0}{3/2} - 0\right) + 3/2\,(0 - 1) \right|$$

$$\frac{1}{2} \left| 3/2 - 3/2 \right| = 0$$

Area = $3/4$