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Mata Kuliah : Pengantar Matematika Bisnis

$$13. Y = x^2 - 3x + 2$$

a. Tentukan

$$= a > 0 \quad \cup$$

b. Titik Puncak

$$\left\{ \frac{-b}{2a}, \frac{-D}{4a} \right\} = \left\{ \frac{3}{2(1)}, \frac{-1}{4(1)} \right\} = (1,5, -0,25)$$

c. Diskriminan

$$D = b^2 - 4ac$$

$$= (-3)^2 - 4(1)(2)$$

$$= 9 - 8 = 1$$

$D > 0$  terbagi keatas dan memotong sumbu x di dua titik yang berlainan

$$d. X_{1,2} = \frac{3 \pm \sqrt{1}}{2(1)}$$

$$X_1 = \frac{3+1}{2} = 2$$

$$X_2 = \frac{3-1}{2} = 1$$

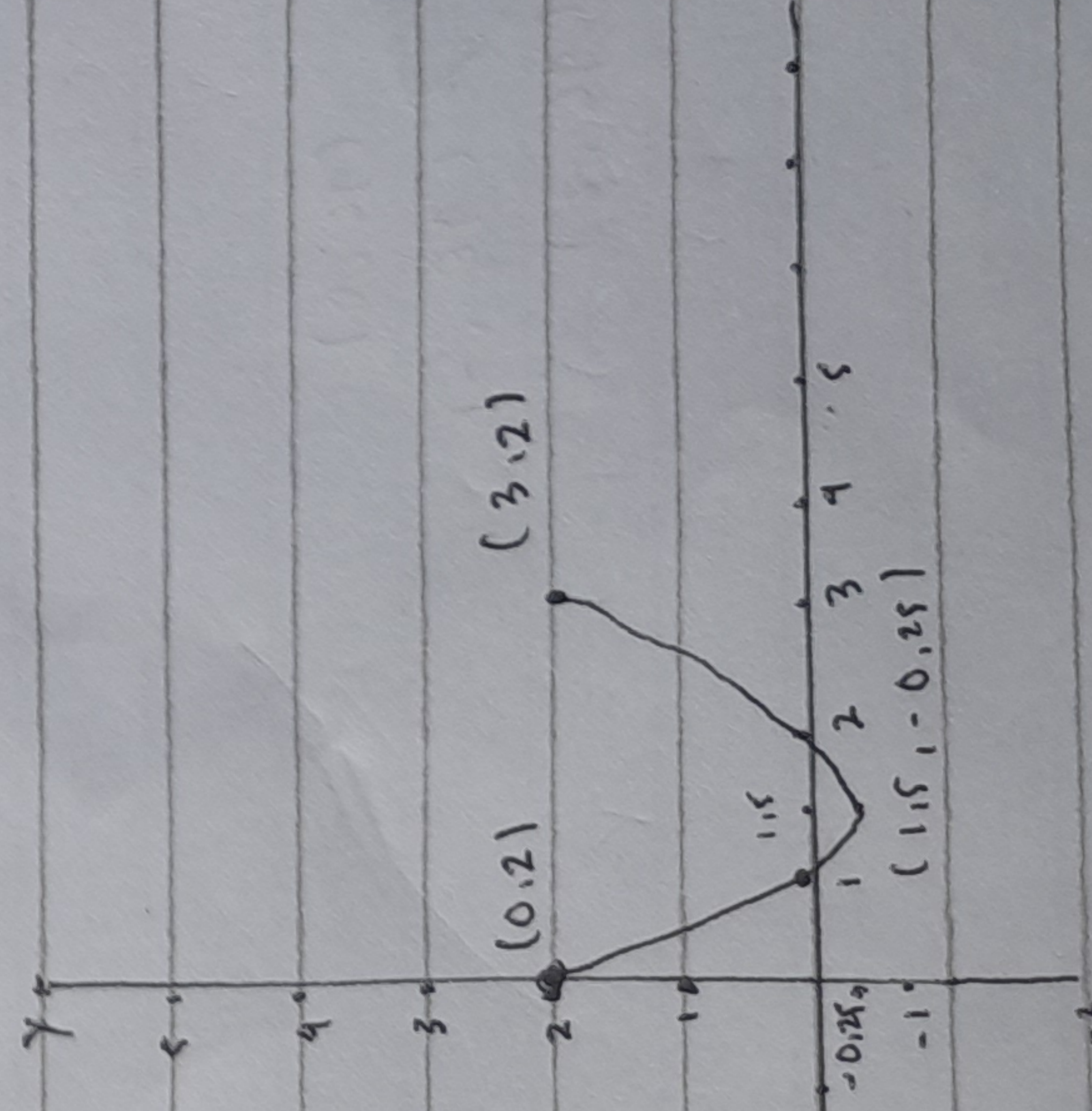
$$Y = x^2 - 3x + 2$$

$$x = 0 \rightarrow y = 2 \quad \cup = (0,2)$$

$$x = 1 \rightarrow y = 1^2 - 3(1) + 2 = 0 \rightarrow (1,0)$$

$$x = 2 \rightarrow y = 2^2 - 3(2) + 2 = 0 \rightarrow (2,0)$$

$$x = 3 \rightarrow y = 3^2 - 3(3) + 2 = 2 \rightarrow (3,2)$$



$$AB. x = 96 - 4y - 2y^2$$

a. Arah Parabola

$$a < 0 >$$

b. Diskriminan

$$D = b^2 - 4ac$$

$$= (-4)^2 - 4(-2)(96)$$

$$= 16 + 768 = 784$$

$D > 0$  turunkan kem dan memotong sumbu y di dua titik

c. Titik Puncak

$$\left\{ \left[ \frac{-b}{2a}, \frac{-b}{2a} \right], \left[ \frac{-784}{4(-2)}, \frac{-4}{2(-2)} \right] \right\} = (96, -1)$$

$$y_{1,2} = \frac{4 \pm \sqrt{784}}{2 \cdot (-2)}$$

$$y_1 = \frac{4 + 28}{-4} = -8$$

$$y_2 = \frac{4 - 28}{-4} = 6$$

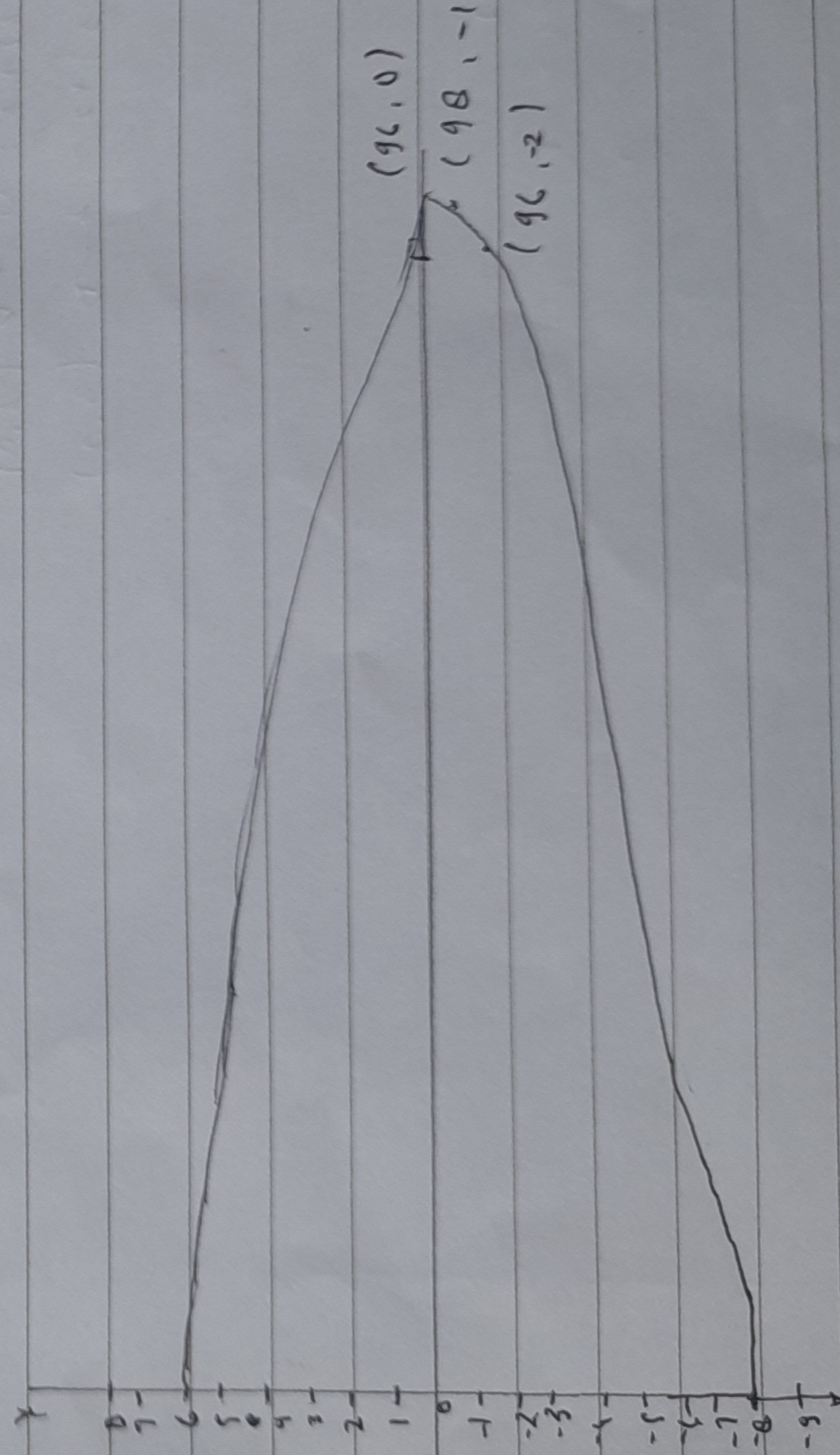
$$x = 96 - 4y - 2y^2$$

$$y = 0 \rightarrow x = 96 - (96, 0)$$

$$y = -2 \rightarrow x = 96 - 4(2) - 2(-2)^2 = 96 \rightarrow (96, -2)$$

$$y = 6 \rightarrow x = 96 - 4(6) - 2(6)^2 = 0 \rightarrow (0, 6)$$

$$y = -8 \rightarrow x = 96 - 4(8) - 2(8)^2 = 0 \rightarrow (0, -8)$$



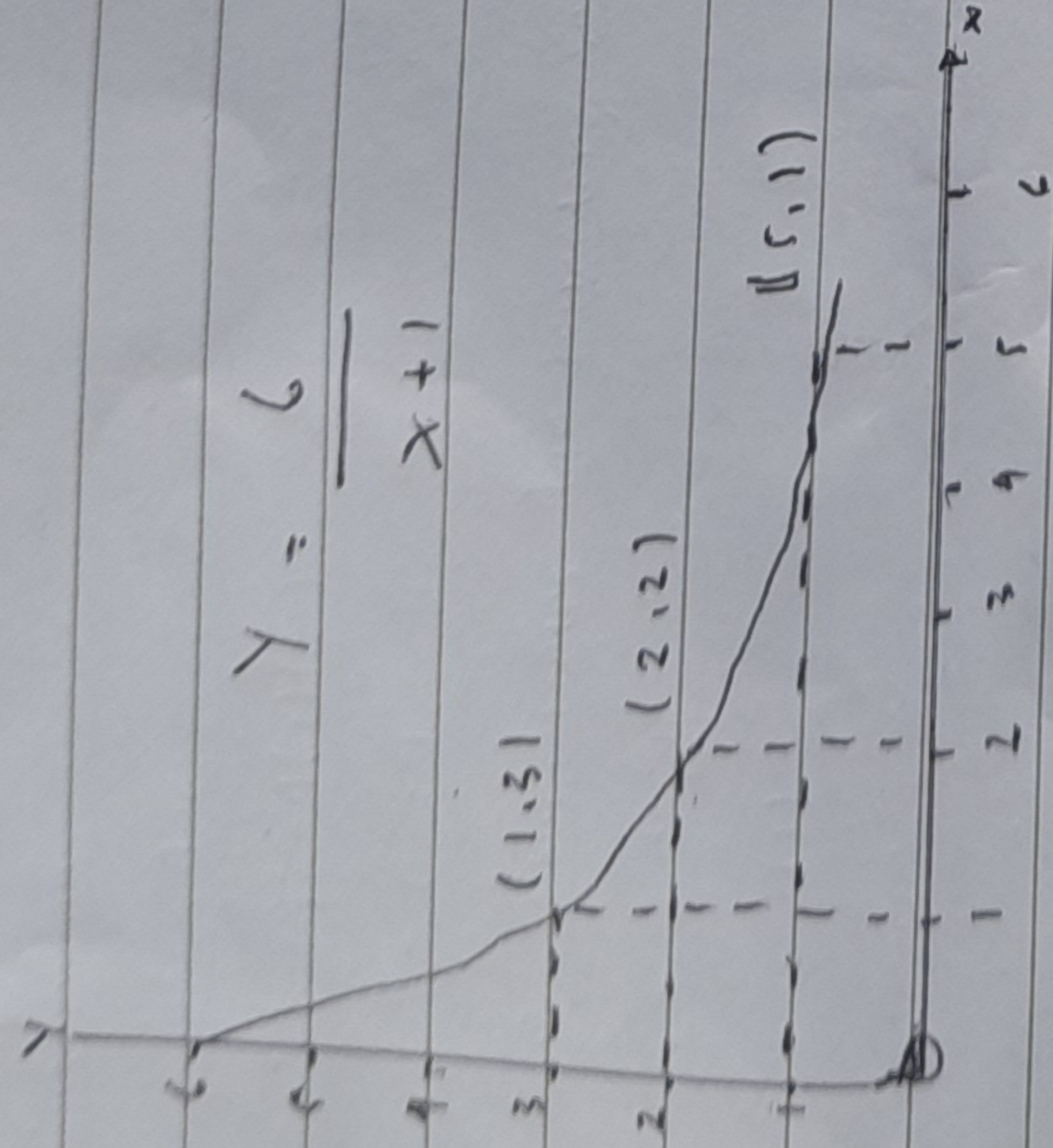
$$69. Y = \frac{6}{x+1}$$

$x+1$

Titik Bantu :  $x = 0 \rightarrow y = \frac{6}{0+1} = 6$  ;  $6$  (0,6)

$$\begin{aligned} x = 1 &\rightarrow y = \frac{6}{1+1} = 3 && (1,3) \\ x = 2 &\rightarrow y = \frac{6}{2+1} = 2 && (2,2) \\ x = 5 &\rightarrow y = \frac{6}{5+1} = 1 && (5,1) \end{aligned}$$

GRAFIK



$$75. (x-3)(y+6) = 90$$

$$x = h = 3$$

$$y = k = -6$$

Titik Pusat (3, -6)

$$\text{Titik bantu } x = 0 \rightarrow (0-3)(y+6) = 90$$

$$-3y - 18 = 90$$

$$-3y = 108$$

$$y = \frac{108}{-3}$$

$$y = -36 \quad (0, -36)$$

$$y = 6 \rightarrow (x-3)(0+6) = 90$$

$$6x - 18 = 90$$

$$6x = 108$$

$$6x = 108$$

$$x = \frac{108}{6}$$

$$x = 18 \quad (18, 0)$$