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Kelas : 1AK - P2

Matkul : Pengantar Matematika Bisnis

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

a. arah parabola

$$a > 0 \quad \cup$$

b. Diskriminan

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

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

$$= 9 - 8 = 1$$

$D > 0$ terbuka keatas &

Memotong sumbu x di dua titik yang berlainan

c. Titik Puncak

$$\left[\frac{-b}{2a}, \frac{-D}{4a} \right] = \left[\frac{3}{2(1)}, \frac{-1}{4(1)} \right]$$

$$= (1,5, -0,25)$$

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

$$x_1 = \frac{3 + 1}{2} = 2$$

$$x_2 = \frac{3 - 1}{2} = 1$$

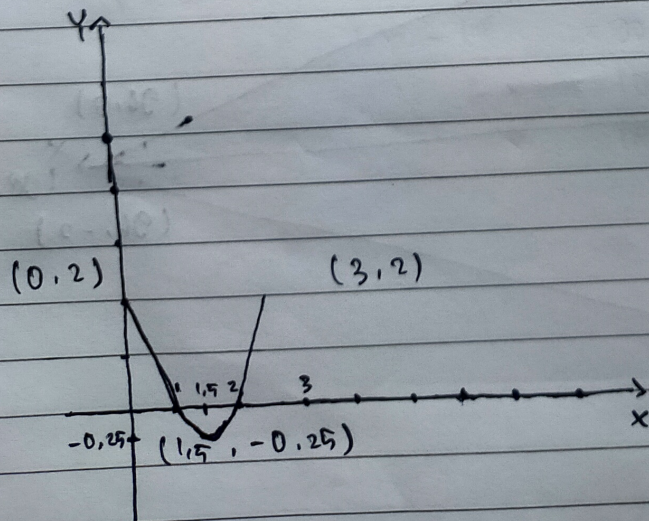
$$y = x^2 - 3x + 2$$

$$x : 0 \rightarrow y = 2 \rightarrow (0, 2)$$

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

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

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



$$48. x = 96 - 4y - 2y^2$$

A. Arah Parabola

$$A < 0 >$$

b. Diskriminan

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

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

$$= 16 + 768 = 784$$

$D > 0$ terbuka ke kiri &

memotong sumbu Y di dua titik

c. Titik Puncak

$$\left[\frac{-D}{4a}, \frac{-b}{2a} \right] = \left[\frac{-784}{4(-2)}, \frac{4}{2(-2)} \right]$$
$$= (98, -1)$$

$$d. Y_1 = \frac{4 \pm \sqrt{784}}{2(-2)}$$

$$Y_1 = \frac{4 + 28}{-4} = -8$$

$$Y_2 = \frac{4 - 28}{-4} = 6$$

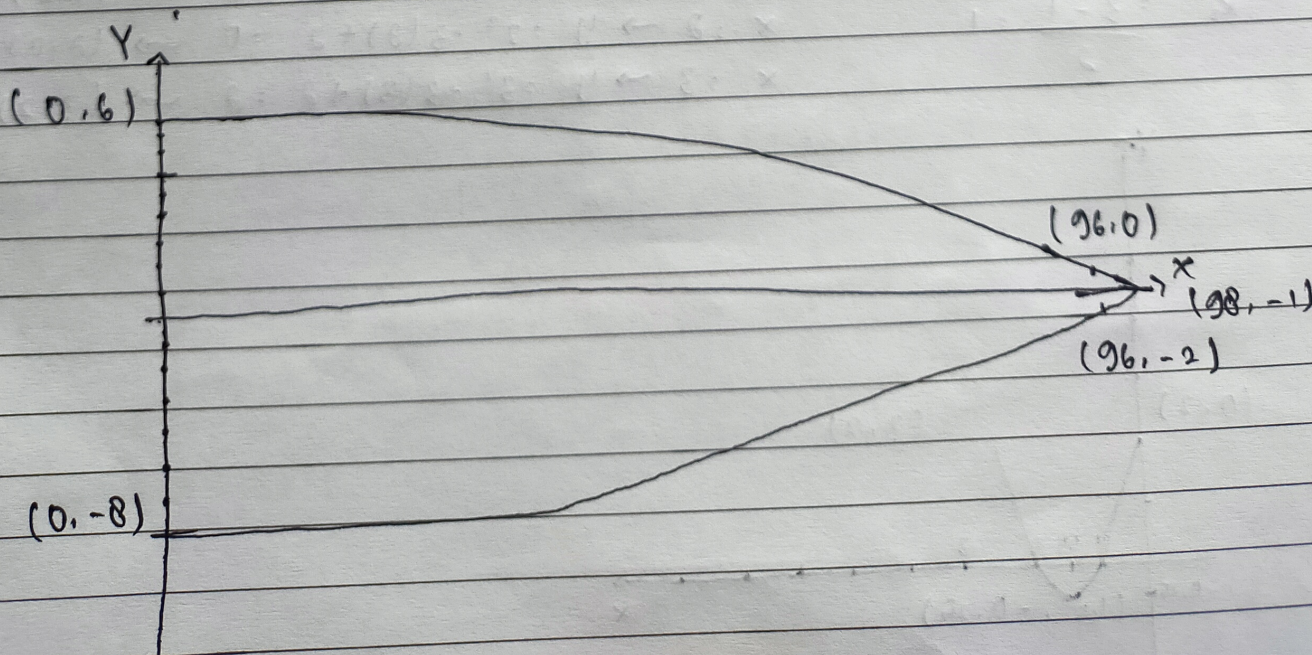
$$x = 96 - 4y - 2y^2$$

$$Y = 0 \rightarrow x = 96 \rightarrow (96, 0)$$

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

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

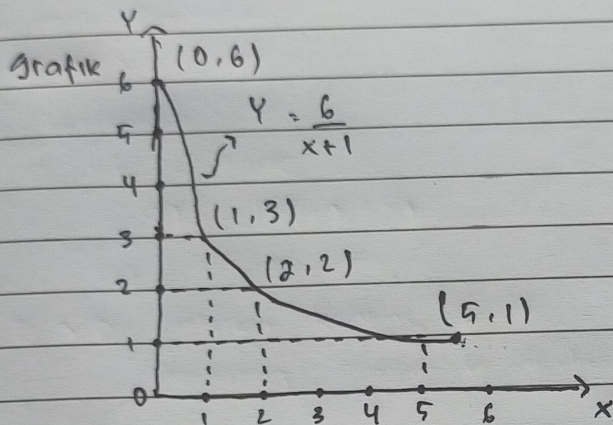
$$Y = -8 \rightarrow x = 96 - 4(8) - 2(-8)^2 = 0 \rightarrow \text{~~(0, -8)~~ (0, -8)}$$



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

titik bantu

$x = 0$	$\rightarrow Y = \frac{6}{0+1} = 6$	$(0, 6)$
$x = 1$	$\rightarrow Y = \frac{6}{1+1} = 3$	$(1, 3)$
$x = 2$	$\rightarrow Y = \frac{6}{2+1} = 2$	$(2, 2)$
$x = 5$	$\rightarrow Y = \frac{6}{5+1} = 1$	$(5, 1)$



$$79. (x-3)(y+6) = 90$$

$$x = h = 3$$

$$y = k = -6$$

titik pusat $(3, -6)$

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

$$-3y - 18 = 90$$

$$-3y = 108$$

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

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

$$6x - 18 = 90$$

$$6x = 108$$

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