

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

a. Arah Parabola

$a > 0$ ✓ Parabola Terbuka Keatas

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

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

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

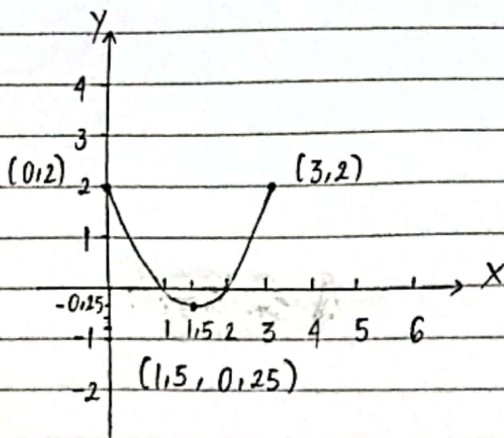
$x = 0 \rightarrow y = 2$ (0,2)

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

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

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

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



⇒ GRAFIK

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

a. Arah Parabola

$a < 0$ > Parabola Terbuka Kekiri

$D > 0$ terbuka ke kiri & memotong sumbu y di dua titik

b. Diskriminan

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

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

$$= 16 + 768 = 784$$

c. Titik Puncak

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

$$= (98, -1)$$

$$d. Y_{1,2} = \frac{4 \pm \sqrt{784}}{2(-2)}$$

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

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

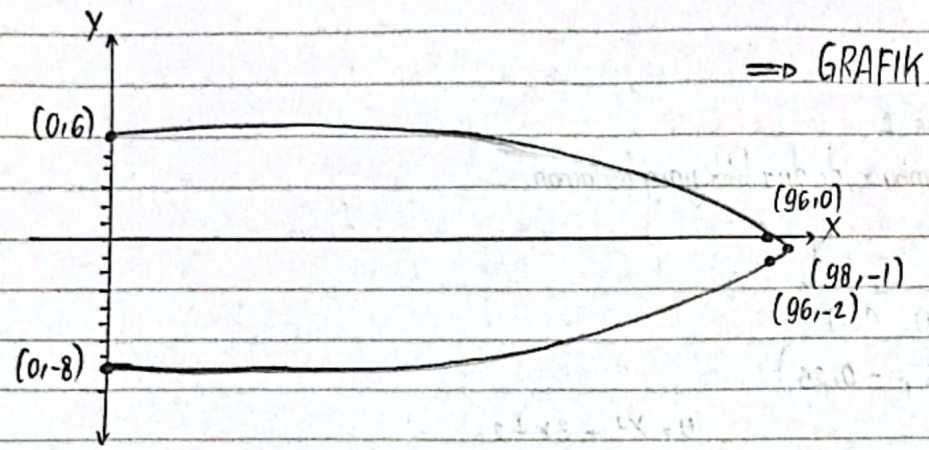
$$\left\{ \begin{aligned} X &= 96 - 4y - 2y^2 \end{aligned} \right.$$

$$Y = 0 \rightarrow X = 96 \quad (96, 0)$$

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

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

$$Y = -8 \rightarrow X = 96 - 4(-8) - 2(-8)^2 = 0 \quad (0, -8)$$



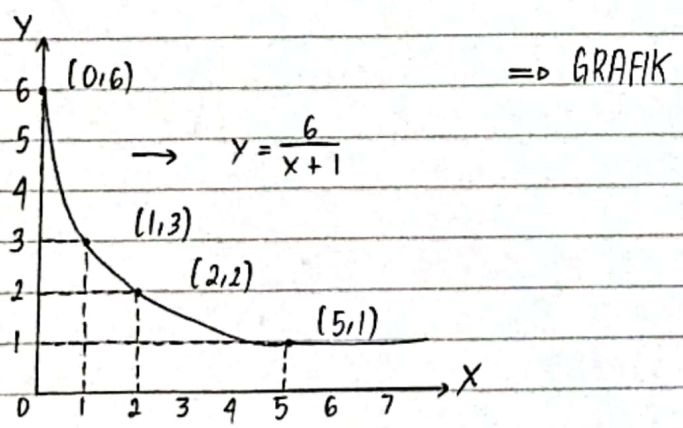
69. $Y = \frac{6}{X+1}$

titik bantu $X = 0 \rightarrow Y = \frac{6}{0+1} = 6 \quad (0, 6)$

$X = 1 \rightarrow Y = \frac{6}{1+1} = 3 \quad (1, 3)$

$X = 2 \rightarrow Y = \frac{6}{2+1} = 2 \quad (2, 2)$

$X = 5 \rightarrow Y = \frac{6}{5+1} = 1 \quad (5, 1)$



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

$$x = h = 3$$

$$y = k = -6$$

Titik Pusat $(3, -6)$

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

$$-3y - 18 = 90$$

$$-3y = 108$$

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

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

$$6x - 18 = 90$$

$$6x = 108$$

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

