

* $x + 2y \leq 8$

x	0	8
y	4	0

$y(0,4)$
 $(8,0)$

* $y \leq -x^2 + 2x + 8$

$a = -1 \quad b = 2 \quad c = 8$

=> Titik potong sumbu x

$-x^2 + 2x + 8 = 0$

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

$x = 4 \quad \vee \quad x = -2$

$(4,0) \quad (-2,0)$

=> Titik potong sumbu y

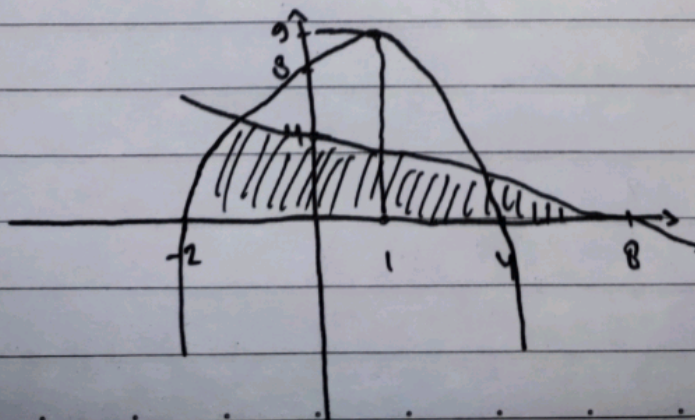
$y = 8 \quad (0,8)$

=> Titik Puncak

$x_p = \frac{-b}{2a} = \frac{-2}{2(-1)} = \frac{-2}{-2} = 1$

$y_p = \frac{b^2 - 4ac}{-4a} = \frac{2^2 - 4(-1)(8)}{-4(-1)}$

$= \frac{4 + 32}{4} = \frac{36}{4} = 9 \quad (1,9)$



• Garis melewati $(0, -2)$ dan $(3, 0)$

maka Persamaan garisnya

$$\frac{y - y_1}{y_2 - y_1} = \frac{x - x_1}{x_2 - x_1}$$

$$= \frac{y - (-2)}{0 - (-2)} = \frac{x - 0}{3 - 0}$$

$$= \frac{y + 2}{2} = \frac{x}{3}$$

$$3(y + 2) = 2x$$

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

diarsir kearah atas

$$\text{maka } 3y - 2x \geq -6$$

• Kurva melewati $(0, 5)$ dan titik Puncak $(2, 9)$

misal Persamaannya $f(x) = ax^2 + b + c$

$$f(0) = 0 + 0 + c$$

$$c = 5$$

$$f(2) = 9$$

$$4a + 2b + 5 = 9$$

$$4a + 2b = 4$$

$$2a + b = 2$$

$$x_p = 2$$

$$x = \frac{-b}{2a}$$

$$2 = \frac{-b}{2a}$$

$$b = -4a$$

$$2a - 4a = 2$$

$$-2a = 2$$

$$a = -1 \quad / \quad b = 4$$

• Maka Persamaan Kurvanya $y = -x^2 + 4x + 5$

diarsir didalam maka $y \leq -x^2 + 4x + 5$

• Maka peridaksamaanya adalah

$$3y - 2x \geq -6$$

$$y \leq -x^2 + 4x + 5$$