

Nama : Deni Eka Aji Jaya Ramadhan

NIM : 19051397038

Prodi : D4 MI 2019B

1. Diketahui P (1,1) Q(10,10) dan, Xmin=1, Ymin=1, Xmax=7, Ymax=7

Vertex P(1,1)

L= 0	Xmin=1	$1 \geq 1$
R= 0	Xmax=1	$1 < 7$
B= 0	Ymin=1	$1 \geq 1$
T= 0	Ymax=1	$1 < 7$

Region code vertex P = 0000

Vertex Q(10,10)

L= 0	Xmin=10	$10 > 1$
R= 1	Xmax=10	$10 > 7$
B= 0	Ymin=10	$10 > 1$
T= 1	Ymax=10	$10 > 7$

Region code vertex P = 0101

Titik potong pada garis PQ

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{10 - 1}{10 - 1} = \frac{9}{9} = 1$$

Karena R=1, maka yp2 adalah

$$y_2 = y_1 + m(x_{min} - x_1) = 1 + 1(1 - 1) = 0$$

maka titik potongnya adalah $(x_{min}, y_2) = (1, 0)$

Karena T=1, maka yang dicari adalah xp2

$$x_2 = x_1 + \frac{y_{max} - y_1}{m} = 1 + \frac{7 - 1}{1} = 7$$

maka titik potongnya adalah $(x_2, y_{max}) = (7, 7)$

ada 2 titik potong yaitu (1,0) dan (7,7)

2. Diketahui $P(1,1)$, $Q(10,10)$ dan, $X_l = 1$, $X_r = 7$, $Y_b = 1$ dan $Y_t = 7$

$$dx = x_2 - x_1 = 10 - 1 = 9 \text{ (0000) (0101)}$$

$$P_1 = \cdot dx = -9 \quad P_3 = \cdot dy = -9$$

$$P_2 = dx = 9 \quad P_4 = dy$$

$$= 9 \quad dy = y_2 - y_1 = 10 - 1 = 9$$

$$\bullet Q_1 = x_1 - x_2 = 1 - 1 = 0$$

$$\bullet Q_3 = y_1 - y_B = 1 - 1 = 0$$

$$\bullet Q_2 = X_R - X_l = 7 - 1 = 6$$

$$\bullet Q_4 = y_T - y_1 = 7 - 1 = 6$$

$$Q_1 / p_1 = 0 / 9 \quad Q_3 / p_3 = 0 / 9 = 0$$

$$Q_2 / p_2 = 6 / 9 = 2/3 \quad Q_4 / p_4 = 6 / 9 = 2/3$$

$$= (p_i < 0) \cdot > T_1 = (0,0,0) = 0$$

$$= (p_i < 0) \cdot > T_2 = (2/3, 2/3, 2/3)$$

$$= 2/3 \quad T_1 < T_2 \Rightarrow T_1 = 0$$

$$\bullet X_1 = x_1 + dx \times t_1 = 1 + 9 \times 0 = 1 + 0 = 1$$

$$\bullet Y_1 = y_1 + dy \times t_1 = 1 + 9$$

$$x_0 = 1 \quad (x_1, y_1) = (1,1) \quad T_2 = 2/3$$

$$\bullet X_2 = x_1 + dx \times t_2 = 1 + 9 \times 2/3 = 1 + 6 = 7$$

$$\bullet Y_2 = y_1 + dy \times t_2 = 1 + 9 \times 2/3 = 7$$

$$\bullet (x_2, y_2) = (7,7)$$