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1.) Diketahui

titik awal $P = (1, 1)$

titik akhir $Q = (10, 10)$

$x_{\min} = 1$ $x_{\max} = 7$

$y_{\min} = 1$ $y_{\max} = 7$

Jawab

→ Garis P

$L = 0$

$R = 0$

$B = 0$

$T = 0$

→ Garis Q

$L = 0$

$R = 1$

$B = 0$

$T = 1$

Region Code

$P = 0000$

$Q = 0101$

→ $0000 \text{ AND } 0101 = 0000$

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

$$x_p = x_1 + \frac{y_{\min} - y_1}{m}$$

$$= 1 + \frac{1 - 1}{1} = \frac{1 + 0}{1} = \frac{1}{1}$$

$$x_p = 1$$

Maka titik potongnya adalah $(x_p, y_{\min}) = (1, 1)$

No.:

Date.:

$$\begin{aligned}
 2.) \text{ Diket } x_1 &= 1 & P &= (1, 1) \\
 x_r &= 7 & Q &= (10, 10) \\
 y_b &= 1 \\
 y_t &= 7
 \end{aligned}$$

Jawab:

$$dx = x_2 - x_1$$

$$dx = 10 - 1 = 9 //$$

$$dy = y_2 - y_1$$

$$= 10 - 1 = 9 //$$

$$\rightarrow p_1 = -dx$$

$$p_1 = -9$$

$$\rightarrow p_2 = dx$$

$$p_2 = 9$$

$$\rightarrow p_3 = -dy$$

$$p_3 = -9$$

$$\rightarrow p_4 = dy$$

$$p_4 = 9$$

$$\rightarrow q_1 = x_1 - x_r$$

$$= 1 - 1$$

$$q_1 = 0$$

$$\rightarrow q_2 = x_r - x_1$$

$$= 7 - 1$$

$$q_2 = 6$$

$$\rightarrow q_3 = y_1 - y_b$$

$$= 1 - 1 = 0$$

$$\rightarrow q_4 = y_t - y_1$$

$$= 7 - 1$$

$$= 6$$

* Untuk $(p_i < 0)$

$$T_1 = \max(0, 0, 0) = 0$$

* Untuk $(p_i > 0) T_2$

$$= \min\left(\frac{2}{3}, \frac{2}{3}, 1\right)$$

$$= \frac{2}{3}$$

Jadi $T_1 < T_2 //$

$$T_1 = 0$$

$$x_1' = x_1 + dx \cdot t_1$$

$$= 1 + 9 \cdot 0$$

$$= 1 + 0$$

$$x_1' = 1 //$$

$$T_2 = \frac{2}{3}$$

$$x_2' = x_1 + dx \cdot t_2$$

$$= 1 + 9 \cdot \frac{2}{3}$$

$$= 1 + 6$$

$$x_2' = 7 //$$

$$y_1' = y_1 + dy \cdot t_1$$

$$= 1 + 9 \cdot 0$$

$$= 1 + 0 = 1 //$$

$$\rightarrow (x_1', y_1') = (1, 1) //$$

$$y_2' = y_1 + dy \cdot t_2$$

$$= 1 + 9 \cdot \frac{2}{3}$$

$$y_2' = 7 //$$

$$\rightarrow (x_2', y_2') = (7, 7) //$$