

Grafik komputer

$(2, 5) \rightarrow (12, 10)$

$$\Delta x = 10$$

$$\Delta y = 5$$

$$m = \frac{1}{2} = 0,5$$

* DDA

$$0 \leq m < 1 \begin{cases} x_n = x + 1 \\ y_n = y + m \end{cases}$$

$$m \geq 1 \begin{cases} x_n = x + \frac{1}{m} \\ y_n = y + 1 \end{cases}$$

x_0, y_0	m	x_n, y_n
2, 5	0,5	3, 6
3, 6	$\frac{1}{3}$	4, 6
4, 6	0,5	5, 7
5, 7	$\frac{3}{4}$	6, 7
6, 7	0,5	7, 8
7, 8	0,4	8, 8
8, 8	0,5	9, 9
9, 9	$\frac{1}{3}$	10, 9
10, 9	0,5	11, 10
11, 10	0	12, 10

* Bresenham

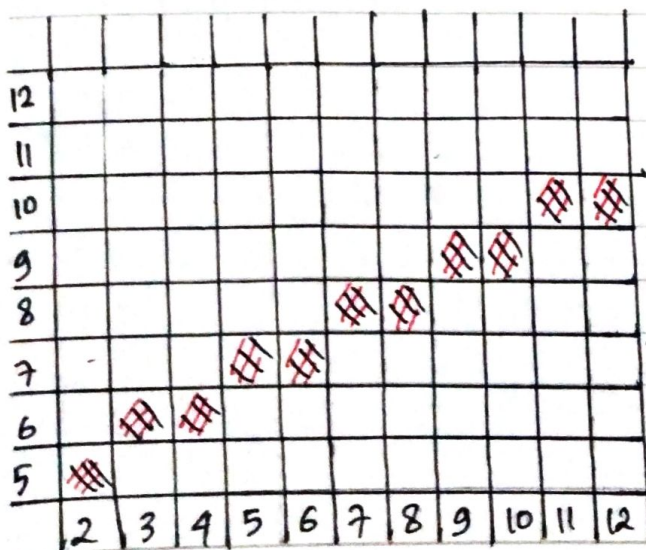
$$P = 2\Delta y - \Delta x = 0$$

$$P_{\oplus} = 2\Delta y - 2\Delta x = -10 \Rightarrow (x_{n+1}, y_{n+1})$$

$$P_{\ominus} = 2\Delta y = 10 \Rightarrow (x_{n+1}, y_n)$$

x_0, y_0	P	x_n, y_n
2, 5	0	3, 6
3, 6	-10	4, 6
4, 6	0	5, 7
5, 7	-10	6, 7
6, 7	0	7, 8
7, 8	-10	8, 8
8, 8	0	9, 9
9, 9	-10	10, 9
10, 9	0	11, 10
11, 10	-10	12, 10

GRAFIK



● = DDA

● = Bresenham