

Astri Salwa Putri Madani

5042284 31A21

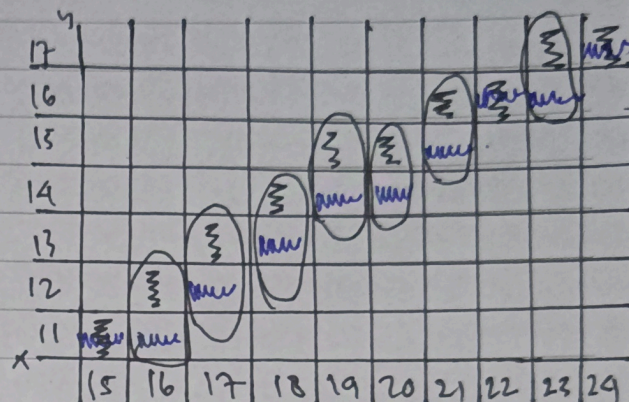
* DDA

$$M = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1} \quad 0 < M < 1 \quad \begin{cases} x_n = x_1 + 1 \\ y_n = y_1 + M \end{cases} \quad \begin{matrix} 0,5 \uparrow \\ 0,5 \downarrow \end{matrix} \quad M > 1 \quad \begin{cases} x_n = (x_1 + \frac{1}{M}) \\ y_n = y_1 + 1 \end{cases}$$

Diket: 14,10 → 24,17

$$m = \frac{\Delta y}{\Delta x} = \frac{17 - 10}{24 - 14} = \frac{7}{10} = 0,7$$

x_0, y_0	m	x_n, y_n
0. 14,10	0,7	15,11
1. 15,11	0,66	16,12
2. 16,12	0,62	17,13
3. 17,13	0,57	18,14
4. 18,14	0,5	19,15
5. 19,15	0,4	20,15
6. 20,15	0,5	21,16
7. 21,16	0,33	22,16
8. 22,16	0,5	23,17
9. 23,17	0	24,17



* Bresenham

$$P_0 = 2\Delta y - \Delta x \quad \begin{cases} + 2\Delta y - 2\Delta x (x_n + 1, y_n + 1) \\ - 2\Delta y (x_n + 1, y_n) \end{cases}$$

■ → x → DDA

■ → y → Bresenham

Diket: 14,10 → 24,17

$$P_0 = 2\Delta y - \Delta x = 2 \cdot 7 - 10 = 14 - 10 = 4$$

$$+ : 2\Delta y - 2\Delta x = 2 \cdot 7 - 2 \cdot 10 = 14 - 20 = -6$$

$$- : 2\Delta y = 2 \cdot 7 = 14$$

x_0, y_0	P	x_n, y_n
0. 14,10	4	15,11
1. 15,11	-2	16,11
2. 16,11	12	17,12
3. 17,12	6	18,13
4. 18,13	0	19,14
5. 19,14	-6	20,14
6. 20,14	8	21,15
7. 21,15	2	22,16
8. 22,16	-4	23,16
9. 23,16	10	24,17