* Bresenham Line Drawing Algorithm :

⇒ It is basically used to eliminate decimal co-ordinates

→ First, co-ordinates will be given.

- Firstly, calculate slope for (x_1, y_1) & (x_2, y_2)

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

- Secondly, calculate decision parameters.

$$(P) = 2\Delta y - \Delta x$$

Then, we have two cases ;

1.) If $m < 1$; 2) If $m \geq 1$

1) If $m < 1$; then check for p

- $p < 0$

$x_{i+1} = x_i + 1$

$y_{i+1} = y_i$

$p_{k+1} = p_k + 2\Delta y$

- $p \geq 0$

$x_{i+1} = x_i + 1$

$y_{i+1} = y_i + 1$

$p_{k+1} = p_k + 2\Delta y - 2\Delta x$

↓ next step ↓ previous value of k

2) If $m \geq 1$; then check for p.

- $p < 0$

$x_{i+1} = x_i$

$y_{i+1} = y_i + 1$

$p_{k+1} = p_k + 2\Delta x$

- $p \geq 0$

$x_{i+1} = x_i + 1$

$y_{i+1} = y_i + 1$

$p_{k+1} = p_k + 2\Delta x - \Delta y$

→ And create a table of x_i, y_i, x_{i+1}, y_{i+1} along with it.

→ Then ~~again~~ : calculate p_{k+1} ~~for~~ ~~the~~ ~~current~~ ~~coordinate~~.

→ Then check the value of p_{k+1}, whether it is less than 0 ; equal to zero or greater than zero. [Update the table alongside]

→ Follow this process till you reach (a_2, y_2).

→ Also, mention all the co-ordinates in the answer.