

DDA Algorithm:

Step 1: Input the starting and ending coordinates of the line (x_1, y_1) and (x_2, y_2)

Step 2: Calculate the differences

$$\Delta x = x_2 - x_1$$

$$\Delta y = y_2 - y_1$$

Step 3: Determine the number of steps

$$\text{Steps} = \max(|\Delta x|, |\Delta y|)$$

Step 4: Calculate the increments

$$x_{inc} = \frac{\Delta x}{\text{steps}}$$

$$y_{inc} = \frac{\Delta y}{\text{steps}}$$

Step 5: Initialize the starting point: $x = x_1, y = y_1$

Step 6: Iterate through the number of steps

a) plot the points $(\text{round}(x_1), \text{round}(y_1))$

b) $x = x + x_{inc}$

$y = y + y_{inc}$

Step 7: End