

- Calculate differences:

- $dx = |x_1 - x_0|$
- $dy = |y_1 - y_0|$

- Decide step direction:

- $sx = 1 \text{ if } x_1 > x_0, \text{ else } -1$
- $sy = 1 \text{ if } y_1 > y_0, \text{ else } -1$

- Initialize starting point:

- $x = x_0, y = y_0$

- If the line is more horizontal ( $dx \geq dy$ ):

- Set decision parameter:  $err = dx / 2$
- Repeat  $(dx + 1)$  times:
  - Plot the point  $(x, y)$
  - Move in x-direction:  $x = x + sx$
  - Update error:  $err = err - dy$
  - If  $err < 0$ :
    - Move in y-direction:  $y = y + sy$
    - Correct error:  $err = err + dx$

- Else (line is more vertical,  $dy > dx$ ):

- Set decision parameter:  $err = dy / 2$
- Repeat  $(dy + 1)$  times:
  - Plot the point  $(x, y)$
  - Move in y-direction:  $y = y + sy$
  - Update error:  $err = err - dx$
  - If  $err < 0$ :
    - Move in x-direction:  $x = x + sx$
    - Correct error:  $err = err + dy$

- The plotted points represent the required line.