# Bresenham’s Line Algorithm:

**Case I: Positive slope and ⎪m⎪<1**

1. Input line end points (x1,y1) and (x2,y2)
2. Calculate Constants:

Δx = x2-x1

Δy = y2-y1

1. Assign value to the starting parameters:

k = 0

Po = 2Δy - Δx

1. Plot the pixel at (x1, y1)
2. For each integer x-coordinate, xk along the line

If Pk < 0 plot pixel at (xk +1, yk )

Pk+1 = Pk + 2Δy (note that 2Δy is pre-computed constant)

else,

plot pixel at (xk+1, yk +1)

Pk+1 = Pk + 2Δy - 2Δx(note that 2Δy - 2Δx is pre-computed constant)

1. Increment k

while x1 < x2