

Bresenham's Line Drawing Algorithm

$$\Delta x \leftarrow x_1 - x_0$$

$$\Delta y \leftarrow y_1 - y_0$$

$$p \leftarrow 2\Delta y - \Delta x$$

$$y \leftarrow y_0$$

for x from x_0 to x_1 **do**

 draw(x, y)

if $p \geq 0$ **then**

$$y \leftarrow y + 1$$

$$p \leftarrow p + 2\Delta y - 2\Delta x$$

else

$$p \leftarrow p + 2\Delta y$$

end if

end for