

Attendance quiz 8

The point p1 (9,1) resides in the bottom right region with code 0 0 1 1

The point p2 (3,5) resides in the middle left region with code 1 0 0 0

$m = -2/3$

The codes will be ANDed to get 0 0 0 0, which means the line is not completely outside the window

The new endpoint for P2 will be calculated using:

$x = W_{\text{left}}$

$y = y_1 + m(x - x_1)$

where  $m = \text{slope}$ ,

since P2 crosses  $W_{\text{left}}$

$x = 4, y = 5 - 2/3(4-3) = 5 - 2/3 = 4 \frac{1}{3}$

(4, 4.333)

The new endpoint for P1 will be calculated using:

$x = W_{\text{right}}$

$y = y_1 + m(x - x_1)$

where  $m = \text{slope}$ ,

since P1 crosses  $W_{\text{right}}$

$x = 8, y = 1 - 2/3(8 - 9) = 1 + 2/3$

(8, 5/3)

then,

$y = W_{\text{bottom}}$

$x = x_1 + (y - y_1)/m$

where  $m = \text{slope}$ ,

since P1 also crosses  $W_{\text{bottom}}$

$y = 2, x = 8 + (2 - 5/3)/(-2/3) = 8 - 2/3 = 22/3 = 7.3333$

(7.3333, 2)

