

CSE 107 - HW5

10.23: Refer to the Hough transform discussed in section 10.2.7.

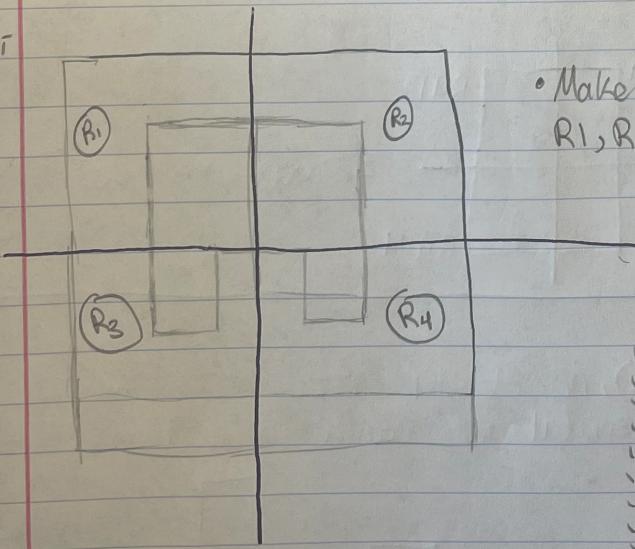
- a) Explain why the Hough mapping of point 1 in Fig. 10.33(a) is a straight line in Fig. 10.33(b).

- When looking at 2 points, these can define that a line is a representation of the plane. The 2 points say from a and b give 2 different lines in the same space. So from both lines in "a" and "b" these will give an intersection that would represent a similar space between both of the lines. If more areas were given the lines that lie on that point of interest will make a cluster of crossings, in that space.

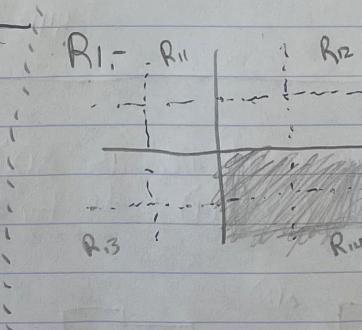
- b) Is this the only point that would produce that result? Explain?

This point won't make that only intersection in that area of its space. Since it is calculated by 'min' and 'max' these could give representations towards areas that could represent that intersection.

10.39:



- Make R into 4 different regions, R₁, R₂, R₃, R₄ are 4 regions



- R₁₁, R₁₂, R₁₃, R₁₄ are 4 sub-parts of R₁ region

- Q(R₁₁) = Q(R₁₂) = Q(R₁₃) = True
- Q(R₁₄) = False
- No further splitting needed