

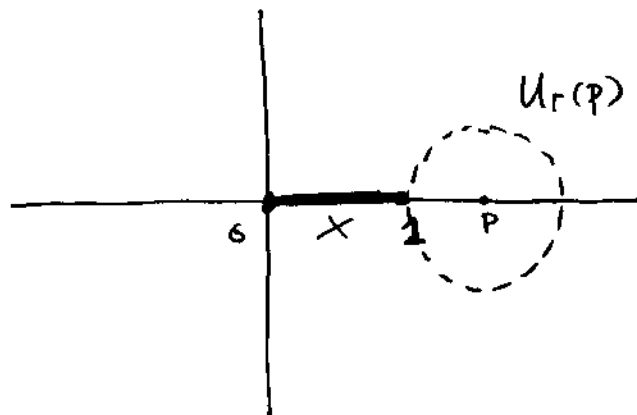
Case (2): p is on the x -axis.

If p is on the x -axis then either $x_1 < 0$ or $x_1 > 1$.

In this case we can set $r = \min \{ |x_1|, |x_1 - 1| \}$.

Then every point $y = (y_1, y_2) \in U_r(p)$ will also satisfy $y_1 < 0$ or $y_1 > 1$. Hence, $U_r(p) \subset X^c$.

i.e.



2