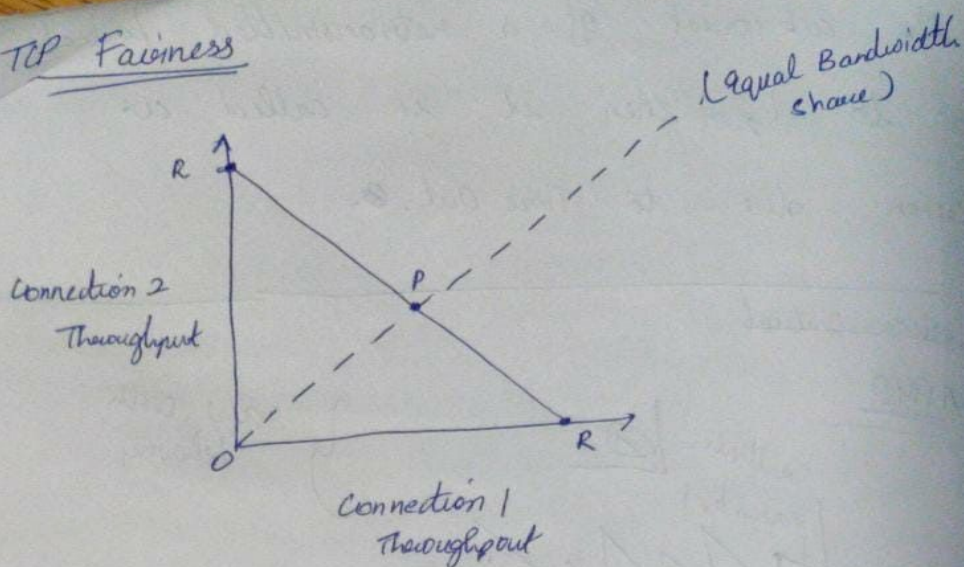


TCP Fairness

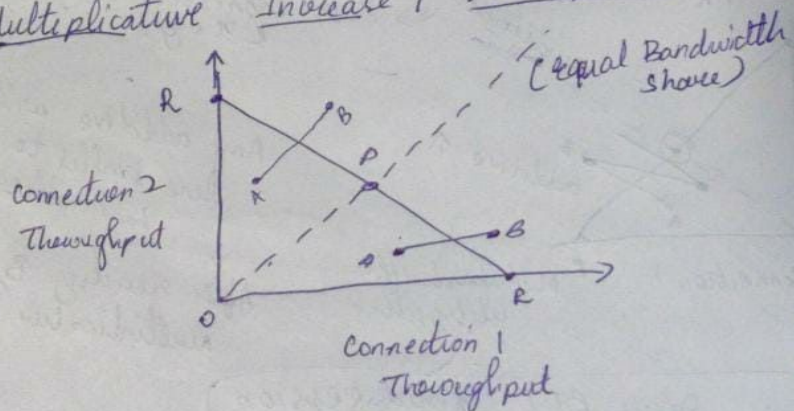


(2)

Goal: To check the fairness of TCP.

To achieve equal bandwidth per two flows is hard because they start at different time.

C1) Multiplicative Increase / Multiplicative decrease

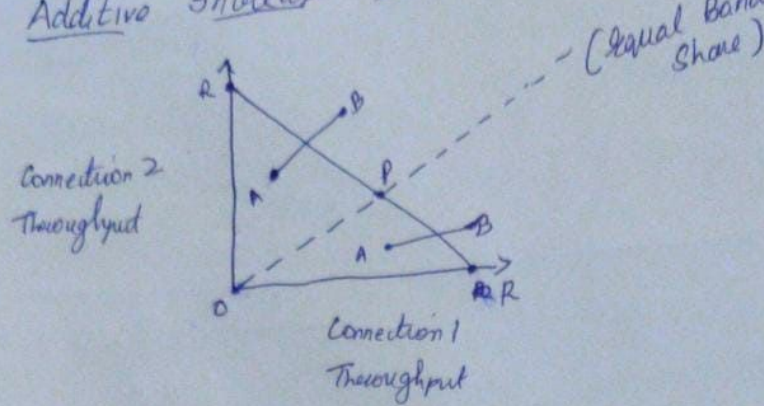


In this case, we increase and go to B, then decrease and come back to A.

The line A to B will be static & will not move closer to the Equal Bandwidth share line (or) closer to the point P.

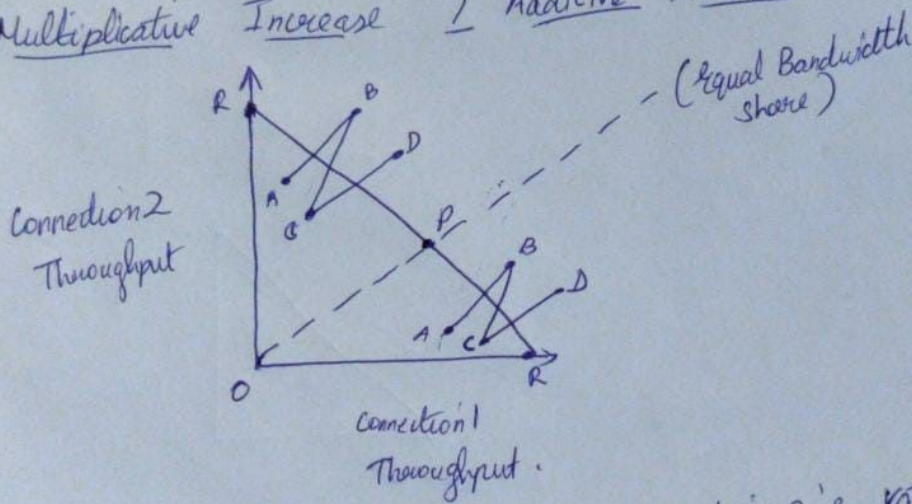
Therefore not fair.

(2) Additive Increase and Additive Decrease



Here also, the point A will increase additively and go to B. After that, will decrease additively and come back to A. Not going closer to Equal Bandwidth share line. Therefore not fair.

(3) Multiplicative Increase / Additive Decrease



Here we can see that the connection 2's rate converges to the Equal Bandwidth share line, but connection 1's rate is decreasing rapidly & is going away from the Equal Bandwidth share line. Connection 2 will have higher amount of data sent to congestion control compared to