10.2 Nash Equilibrium - Bertrand Duopoly

Wednesday, September 30, 2020 7:10 PM

Announce price P_i
Fill all demand at P_i
Consumers buy from lowest priced firm
If $P_1 = P_2$, split demand

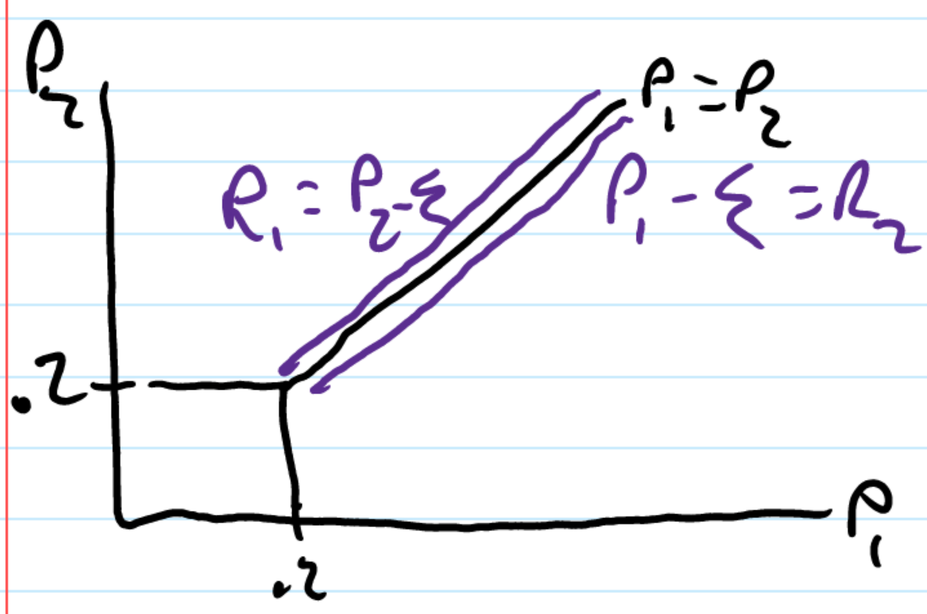
Mkt price $= \min(P_1, P_2) = P$

$Q = 1 - P$

$\Pi_1 = (1-P_1)(P_1 - .2)$ if $P_1 < P_2$
$= 0$ if $P_1 > P_2$
$\Pi = (1-P_1)(P_1 - .2)/2$

$BR = P_2 - \xi \qquad P_2 > .2$

$P_2 = \geq .2 \qquad P_2 = .2$
$\geq .2 \qquad P_2 < .2$



$P_1 = P_2 = .2$

Price competition is fiercer than quantities