

## 9.6 Nash Equilibrium - Bertrand Duopoly

Wednesday, September 30, 2020 7:10 PM

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

$$\text{Mkt Price} = \min(P_1, P_2) = P$$

$$Q = 1 - P$$

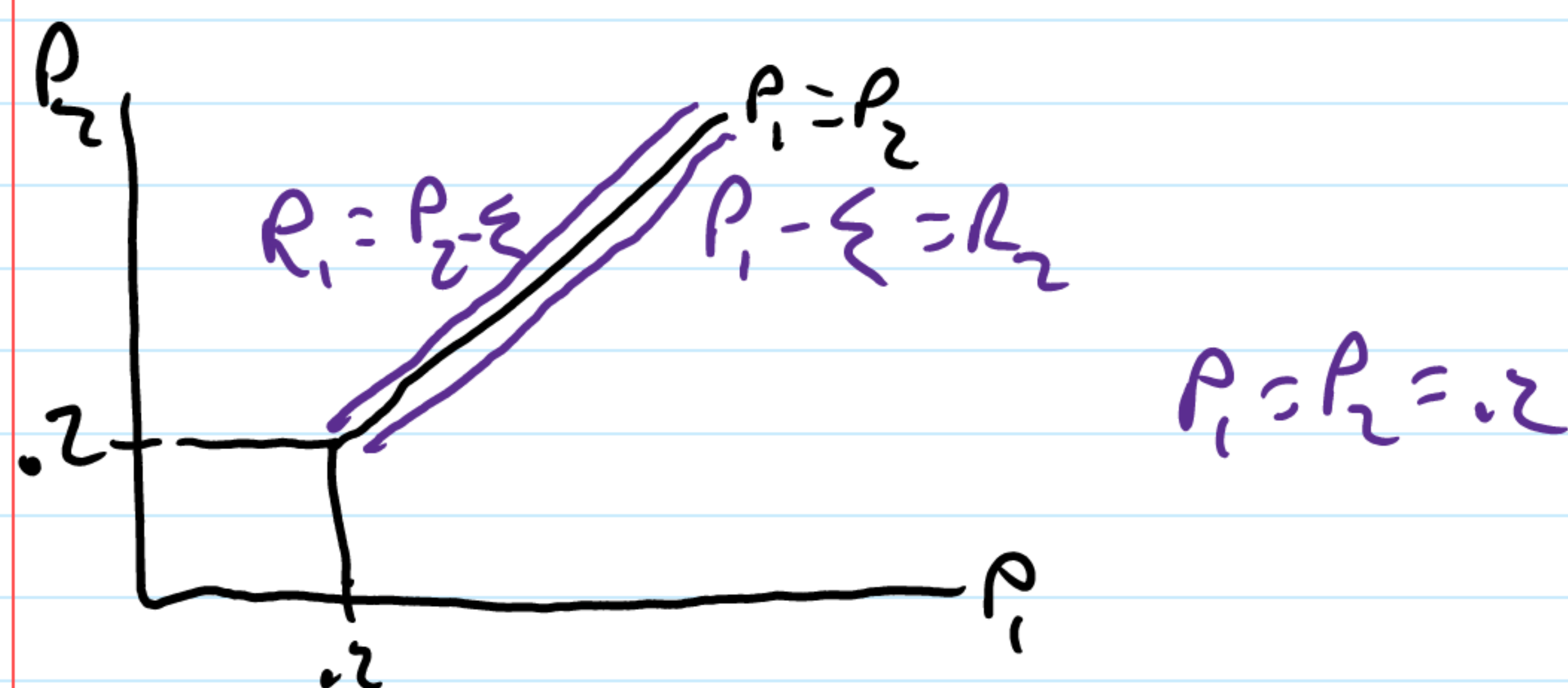
$$\Pi_i = (1 - P_i)(P_i - .2) \quad \text{if } P_i < P_j$$

$$= 0 \quad \text{if } P_i > P_j$$

$$\Pi = (1 - P_i)(P_i - .2)/2$$

$$BR = P_2 - \epsilon \quad P_2 > .2$$

$$P_2 = \begin{matrix} \geq .2 \\ \geq .2 \end{matrix} \quad \begin{matrix} P_2 = .2 \\ P_2 < .2 \end{matrix}$$



Price competition is fiercer than quantities