

3rd Deg. Price Discrimination Example

- Demands
 - Market 1: $P=20-Q_1$
 - Market 2: $P=30-2Q_2$
- Cost
 - $TC=(1/3)Q_T+(1/3)(Q_T^2)$
 - where $Q_T=Q_1+Q_2$
- What does this situation look like?
 - What is total demand?

A More Elegant Approach

- $\pi = P_1(Q_1) * Q_1 + P_2(Q_2) * Q_2 - TC(Q_1 + Q_2)$
- Firm problem: how to set P_1, P_2 to maximize profits
- Two first order conditions

Application: student air fares

- Northwest Airlines and American Express used to offer coupons allowing student round trips for \$118
- Corresponding coach fare=\$469
- Suppose the non-student elasticity of demand for coach seats =-1.30. What must the student demand elasticity be, if the discount tickets are priced correctly?

Intertemporal Price Discrimination

- Demand curves change over time
 - Note: demand not additive across time groups, as it was across groups in 3rd deg.
- Examples?

Peak-Load Pricing

- Costs vary by time of day, say due to congestion
 - Here, again, output not produced simultaneously
 - Examples?

- Charge different, monopoly prices at different times

