

Econ 324, Fall 2004  
Answers to 1<sup>st</sup> Assignment

1. a) An increase in price reduces the quantity of tickets demanded. Note: this is a movement along the demand curve, and not a shift.  
b) The demand curve increases (shifts out).  
c) The demand curve increases (shifts out).  
d) The demand curve decreases (shifts in).
  
2. a) The demand curve increases  
b) The demand curve decreases  
c) The demand curve decreases  
d) The demand curve increases  
e) Demand shifts have occurred in both directions. If all had shifted the wrong way, this "institution" might not be as hallowed as it is today.
  
3. The demand for flour has increased, but its real price has fallen. There are 2 reasons on the supply side: (i) the long run supply of flour is very elastic (the curve is nearly horizontal); (ii) due to better technology, the long run supply curve has shifted down.

The demand for pro basketball in NYC has increased, but the supply has not changed (remains vertical). Hence basketball tickets have risen in price over time.

4. Demand:  $P = 100 - .01Q$   
MC = 0

a) Write down MR:

$$MR = 100 - .02Q$$

Set MR = MC:

$$100 - .02Q = 0$$

Solve for Q\*:

$$Q^* = 100/.02 = 5,000$$

Plug Q\* into demand & solve for P:

$$P = 100 - .01(5,000) = \$50$$

- b)  $Rev = P*Q = \$50*5,000 = \$250,000$
- c) Sellout price:  $P = 100 - .01(75,000) = \$25$
- d) Revenue from sellout:  $\$25*7,500 = \$187,5000$   
revenues are lower by \$62,500 at the sellout price

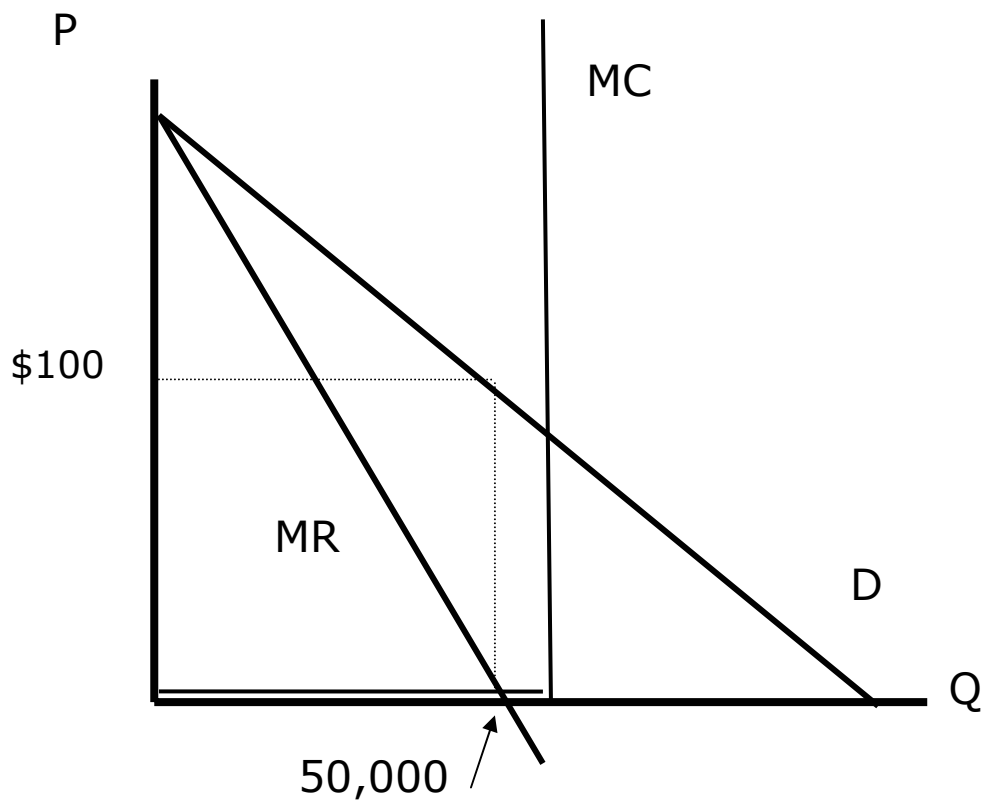
5. Demand:  $P = 200 - .002Q$   
 $MC = 0$

a)  $MR = 200 - .004Q$   
 $200 - .004Q = 0$

$Q = 200/.004 = 50,000$

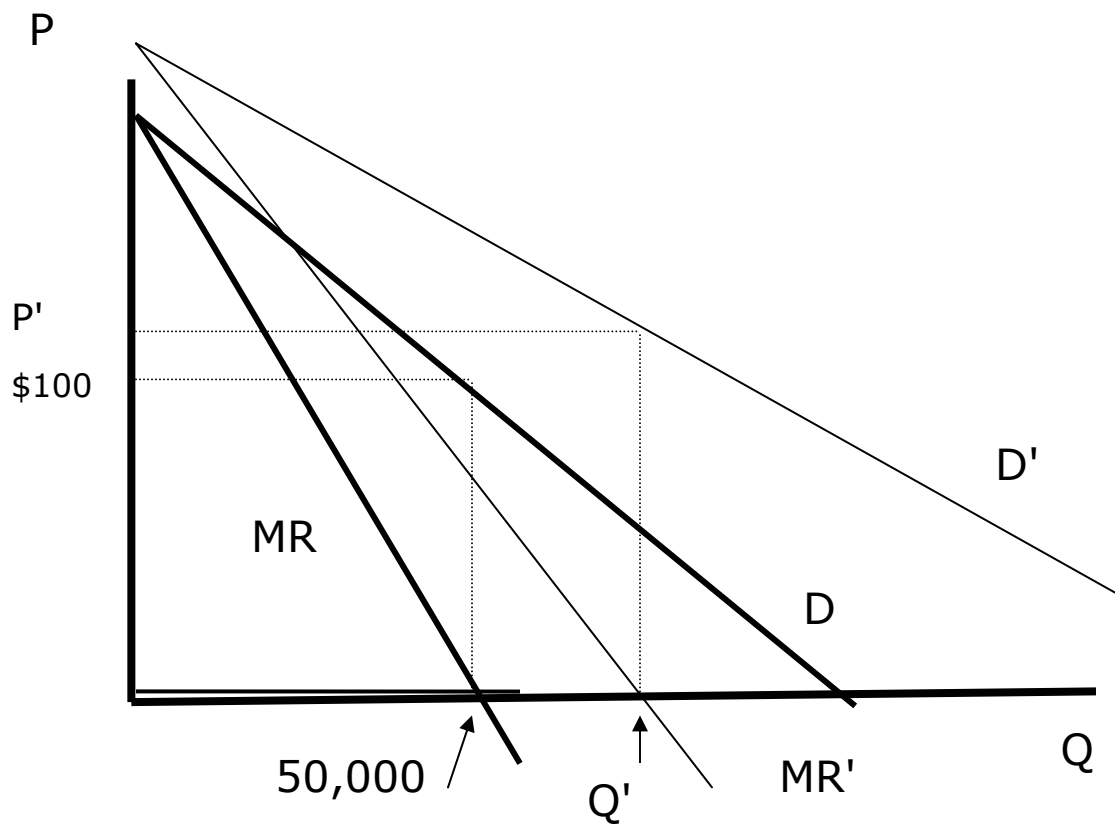
$P = 200 - .002(50,000) = \$100$

b)



c) Better players increases demand and MR; the profit-maximizing price & quantity thus both increase.

d)



The effect is due to the quality of the players and does not depend on how much they are paid.

e) Demand increases to:  $P = 300 - .002Q$

$$MR = 300 - .004Q = 0$$

$$Q = 300/.004 = 75,000 > 55,000 \text{ capacity}$$

They'd "like" to sell 75,000 tickets at \$150 each.

Given capacity is 55,000, they can only sell that much at

$$P = 300 - .002(55,000)$$

$$= 300 - 110 = \$190$$

7. a) Rent of avg ballplayer = \$2.5m - \$100k = \$2.4m

b) i) If salaries were \$250k and opportunity costs were \$100k, the same players would be in MLB.

ii) Reducing player wages reduces the incentive for them to invest in their skills, fitness, & health.

iii) Late night drinking, to the extent it reduces next day performance (I presume it does), would be more costly in today's market, so you should see less of it. I believe you do see less of this behavior and more investment in ii), above.