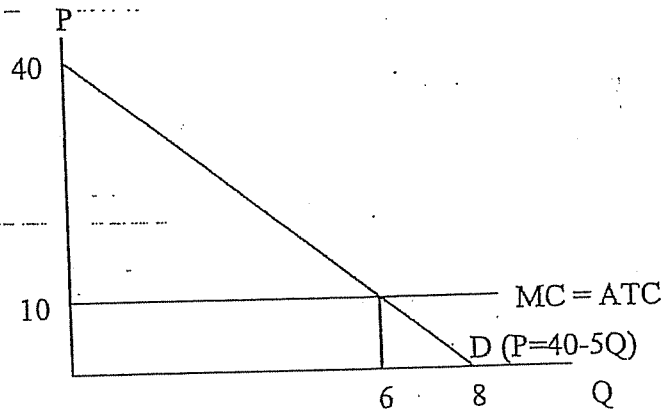


- A. Assume a typical consumer's annual demand (D) facing a 'Book-of-the-Month Club' is given below as well as the company's marginal cost.



1. If this company uses a traditional MR = MC pricing strategy to maximize its profits, a) what P would the company charge each typical consumer and b) what is the resulting profit per consumer?

$$\begin{aligned} \text{a) } &\Rightarrow MR = MC \\ &\Rightarrow 40 - 10Q = 10 \\ &\Rightarrow 10Q = 30 \\ &\Rightarrow Q = 3 \end{aligned}$$

$$\begin{aligned} &\Rightarrow P = 40 - 5Q \Rightarrow \\ &\Rightarrow P = 40 - 5(3) = 25 \end{aligned}$$

$$\begin{aligned} \text{b) } \pi &= TR - TC \\ &= PQ - ATC(Q) \\ &= (25)(3) - (10)(3) \\ &= 75 - 30 \\ &= \boxed{\$45 = \pi} \end{aligned}$$

2. If this company uses a "two-part" pricing strategy a) what prices would the company charge each customer and b) what is the resulting profit per consumer?

$$\begin{aligned} \text{a) Set } P &= MC = 10 \\ \text{Charge membership fee} &= \text{consumer surplus} \\ &= \frac{1}{2}(40 - 10)(6) \\ &= \boxed{\$90} \end{aligned}$$

$$\begin{aligned} \text{b) } \pi &= Pq + \text{fee} - ATC(q) \\ &= (10)(6) + 90 - (10)(6) \\ &= \boxed{\$90 = \pi} \end{aligned}$$

3. If this company uses a "quantity discount" strategy with a P of \$20 per book for $Q \leq 4$ and $P = \$15$ per book purchased for $Q > 4$, what is the likely resulting profit per consumer?

$$\begin{aligned} \pi &= P_1 Q_1 + P_2 Q_2 - ATC(Q_1 + Q_2) \\ &= (20)(4) + (15)(1) - (10)(4 + 1) \\ &= 80 + 15 - 50 = \boxed{45 = \pi} \end{aligned}$$

- B. Assume a concession stand operator at a football game is selling mugs (with the home team logo on it) and pop. Customer-spectators can buy the mug separately, pop separately (sold in paper cups), or the two items combined (i.e. bundled). Furthermore, the operator has divided its customers (30,000 per game) into two groups – season ticket holders (15,000) and non-season ticket holders (15,000). The maximum amount each of these customers is willing to pay is given below:

Customer	Mug	Pop
Season ticketers	5.00	2.00
Non-season ticketers	3.00	3.00

Assume the company simply wants to MAXIMIZE TOTAL REVENUE from concession stand sales.

4. If the mugs and pop are priced separately, a) what prices would be charged and b) what is the likely resulting combined total revenue?

<u>MUGS</u>		<u>POP</u>	
<u>P</u>	<u>TR</u>	<u>P</u>	<u>TR</u>
3	$3(30,000) = 90,000$ *	2	$2(30,000) = 60,000$ *
5	$5(15,000) = 75,000$	3	$3(15,000) = 45,000$

* $P_{\text{MUGS}} = \$3$ * $P_{\text{POP}} = \$2$

b) $TR_{\text{MUGS}} + TR_{\text{POP}} = 90,000 + 60,000 = \$150,000 \pm \text{combined TR}$

5. If the mugs and pop are "bundled" (i.e. one price for both), a) what price would be charged and b) what is the likely resulting combined total revenue?

<u>Customer</u>	<u>Bundle Value (=P)</u>	<u>Bundle TR</u>
Season	7	$P=6 \Rightarrow 6(30,000) = \$180,000$ *
non season	6	$P=7 \Rightarrow 7(15,000) = \$105,000$

* $P_{\text{bundle}} = 6$