## Finance quiz

Finance

## ASSIGN B <br> USTER

Finance quiz 6 point] Suppose that you are hired as the manager of the Downtown Health Spa in Eugene. Assume that you estimated the average customers monthly demand curve for visiting the health spa as $\mathrm{Q}=100-0$. 5 P , and the total cost of operation as $\mathrm{TC}=6 \mathrm{Q}$, where Q is the number of visit per month, and $P$ is the fee per visit. Suppose that currently this health spa charges $\$ 10$ per-visit fee, and a $\$ 40$ per-month membership fee. Suppose that as the manager's salary, you receive $20 \%$ of spa's monthly profits, suggest a pricing strategy that will increase your salary. Please show your calculations.
$Q=100-0.5 P$
i. $10=100-0.5 \mathrm{P}$
$P=90 / 0.5$
$P=180$
ii. $40=100-0.5 \mathrm{P}$
$P=60 / 0.5$
$P=120$
Therefore, I will prefer to use health spa charges per-visit-free to maximize changes of increasing my salary
7.[1 point]The owner of a monopoly firm which produces and sells computers hires you as the manager of the firm. He asks your opinion on how much to mark up the price over marginal cost (MC) given that the firms objective is to maximize its profits. The only information that the owner provides you is the magnitude of the price elasticity of the demand for its computers which is (8). How much do you recommend this firm to mark up (MUP) its price relative to its MC? (i. e., calculate MUP=[(P-MC)/MC]. Please show your calculation and formulas to support your recommendation.

Extra Credit
$40=100-0.5 P$
$P=60 / 0.5$
$P=120$
$\mathrm{MUP}=[(\mathrm{P}-\mathrm{MC}) / \mathrm{MC}]$
$=[\{120-(-8)\} /-8]$
$=128 /-8$
$M U P=-16$
1.[1 point]The next 4 questions refer to the following figure:

Two firms, $A$ and $B$, produce similar, but not identical, products. BRA and BRB are, respectively, the reaction functions for firms $A$ and $B$, which compete primarily by price.
A)A's best-response curve shows
a. all the Nash equilibrium prices that firm A can charge.
b. how firm B should react to any price set by $A$.
c. the price A should charge to maximize A's profits given each possible price that $B$ might charge.
d. the price A should charge to maximize joint profits.
e. both c and d

Answer: B - How firm B should react to any price set by $A$
$B$ )If firm $A$ is expected to charge a price of $\$ 6$, $B$ should charge a price of
\$ $\qquad$ to maximize B's profit.
a.\$4b.\$7c.\$12d.\$16

Answer: A - \$ 12
C)If firm A predicts B will set a price of $\$ 12$, then firm A should charge a price of \$ $\qquad$ to maximize A's profit.
a.\$6b.\$8c.\$10d.\$12

Answer: C - \$ 10
D)In Nash equilibrium,
a. each firm has an incentive to increase price unilaterally.
b. the two firms are maximizing joint profit.
c. firm A charges $\$ 12$ and firm B charges $\$ 16$.
d. each firm is maximizing its profit, given what the other is doing.
e. both c and d

Answer: B - the two firms are maximizing joint profit

