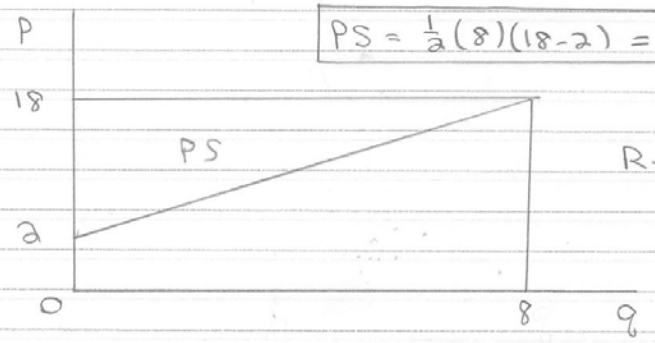
Econ 520 Fall 2005
Final Exam Version B
Problems

1. $MC(q) = 2 + 2q$ and $AVC(q) = 2 + q$

a) $P = MC$ in equilibrium $\Rightarrow$ $\boxed{P = 2 + 2(8) = 18}$
The firm would not alter its profit-maximizing level of output in response to an increase in fixed costs

b) 

$\boxed{PS = \frac{1}{2}(8)(18-2) = 64}$

or

$R - VC = 8 \times 18 - 8 \times 10 = 64$

c) $46 = 8(18-10) - FC \Rightarrow FC = 18$

$\Rightarrow$ $\boxed{AFC = 18/8 = 9/4}$

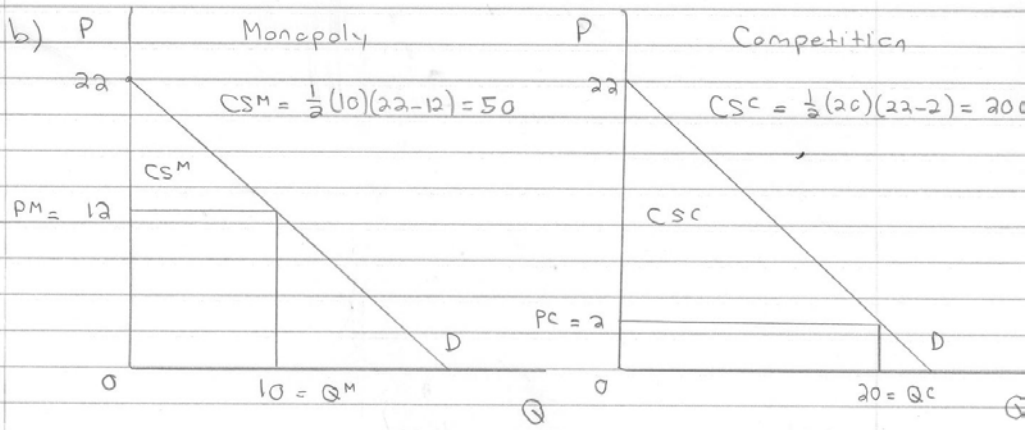
d) The firm will produce a positive level of output for any price greater than the minimum of $AVC(q)$. Hence, the firm will produce a positive level of output for all $\boxed{P > 2.}$

2. $Q = 22 - P \Rightarrow P = 22 - Q$

a) Set $MR = MC \Rightarrow 22 - 2Q = 2 \Rightarrow \boxed{Q^M = 10, P^M = 12}$

$\boxed{\Pi = 10(12-2) - 4 \cdot 10 = 60}$

b)



$\boxed{\Delta CS = CS^C - CS^M = 200 - 50 = 150.}$ This represents how much better off consumers are under the competitive outcome vis a' vis the monopoly outcome

c) $Q = \frac{1}{n}\min\{k, L\} \Rightarrow C(Q) = \left[\frac{4+4}{\frac{1}{n}}\right]Q = 8nQ$

	n	P
Monopoly	1	15
Competitive	2	16
	3	24
	⋮	⋮

With $n=1$, market is a monopoly, Set $MR = MC \Rightarrow 22 - 2Q = 8 \Rightarrow Q^M = 7$ and $P^M = 15$

Hence, $\boxed{\text{Consumers prefer } n=1}$ since it yields the lowest market price - even though it is the monopoly market structure.