



$$P = 10200 - 20Q \rightarrow P_M = 10200 - 20(205) = 6100$$

$$20Q = 10200 - P$$

$$Q = 510 - \frac{P}{20}$$

$$P = 10200 - 40Q$$

$$40Q = 10200 - P \rightarrow Q_M = 255 - \frac{2000}{40} = 205$$

c. $CS = \frac{(10200 - 6100)(205)}{2} = 420250$

d. profit = 840500

$PS = (6100 - 2000)(205) = 840500$

e. Q_M is not efficient $\rightarrow MSB \neq MSC$

$DWL = \frac{(6100 - 2000)(410 - 255)}{2} = 420250$

f. $2000 = 10700 - 20Q_E$
 $20Q_E = 8700$
 $Q_E = 435$

g. outcome is efficient $\rightarrow MSD = MSC$

can't charge higher price because of the price ceiling