

ECON 460 Home Work 1 Answer Key (Kolstad Text)

Page 87 #1

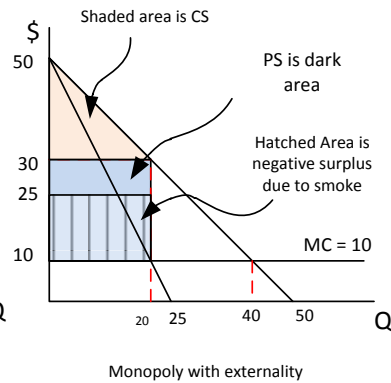
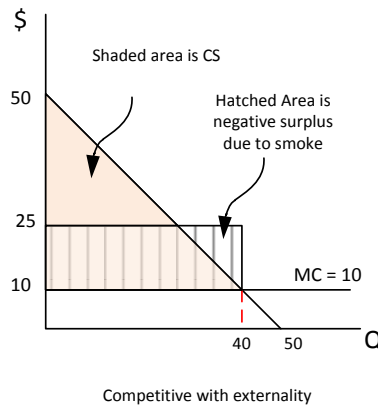
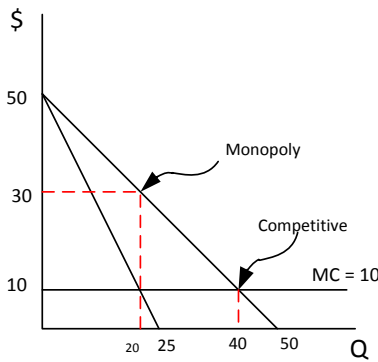
Demand $Q = 50 - P$ or $P = 50 - Q$

$MC = 10$

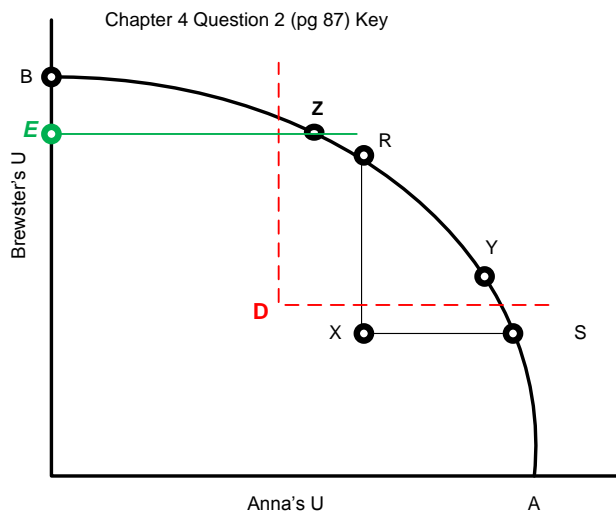
$MEC = 15$

$MSC = 25$

- a) Competitive, ignore externality $P = 10$ $Q = 40$,
b) Monopoly $Q = 20$, $P = 30$
c) Competitive: $CS = 800$ $PS = 0$ $TD = 15 \cdot 40 = 600$ $NET: 800 - 600 = 200$
Monopoly $CS = 200$ $PS = 400$, $TD = 15 \cdot 20 = 300$ $NET: 200 + 400 - 300 = 300$



Question 2



pg 110 #1

Public good: sum demands vertically

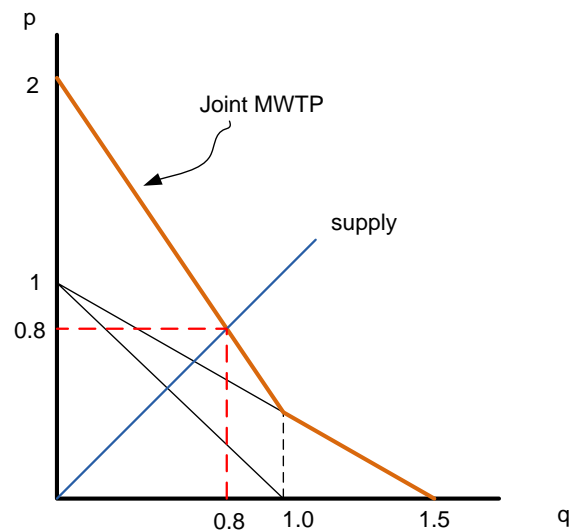
$q_H = 1 - P$ and $q_M = 2 - 2P$ or

$p = 1 - q$ and $p = 1 - 1/2q$

Sum MWTP: **$P = 2 - 1.5q$**

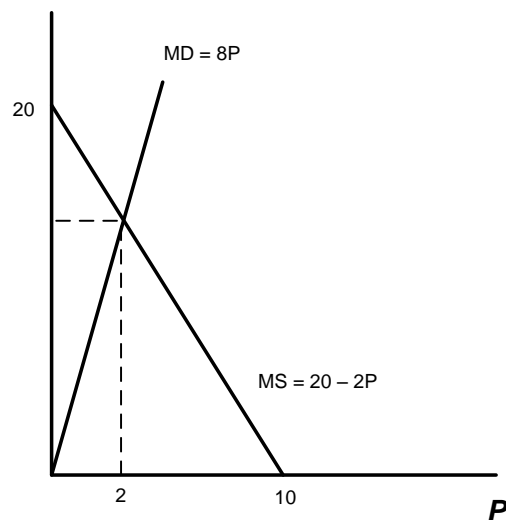
MC: $P = q$ (supply)

Substitution: $P = 2 - 1.5P \Rightarrow 2.5P = 2, \Rightarrow P = 0.8$ and $q = 0.8$

**Question #5,**

(a) $MD^T = 8P$

(b)



(c) $P = 10, P^* = 2$

(d) $MWTP^T = 80 - 8A$

$MC(A) = 2A$

(e) $A^* = 8$