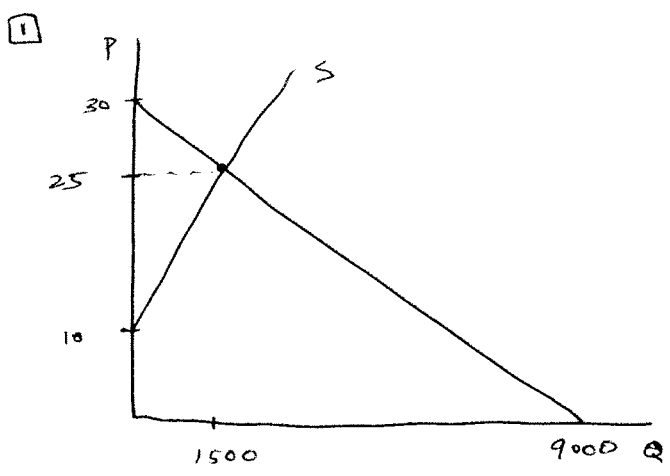


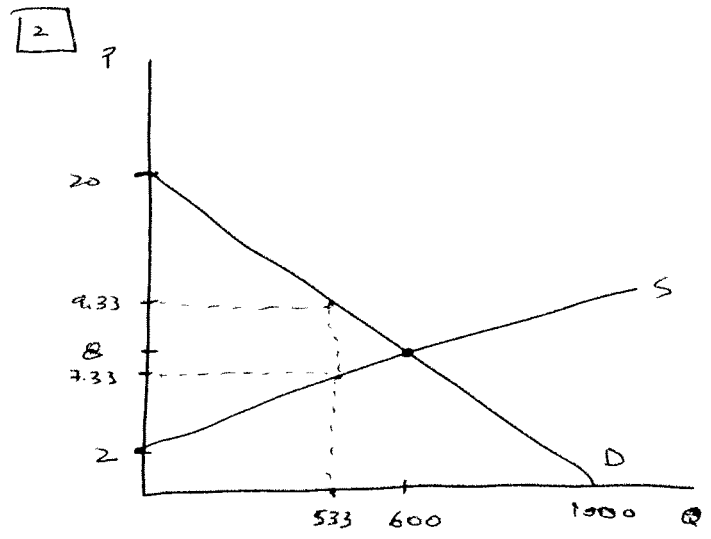
PS 7 Key



b)  $9000 - 300P = -1000 + 100P$   
 $10,000 = 400P$   
 $P^* = 25$   
 $Q^* = 1500$

c)  $CS = \frac{1}{2} \cdot 5 \cdot 1500 = 3750$   
 $PS = \frac{1}{2} \cdot 15 \cdot 1500 = 11,250$

d)  $P = 10 \Rightarrow$  shuts down the market  
 Price ceiling.  
 excess demand  $\Rightarrow 6000 - 0 = 6000$   
 total loss of surplus  $\Rightarrow DWL = 15,000$



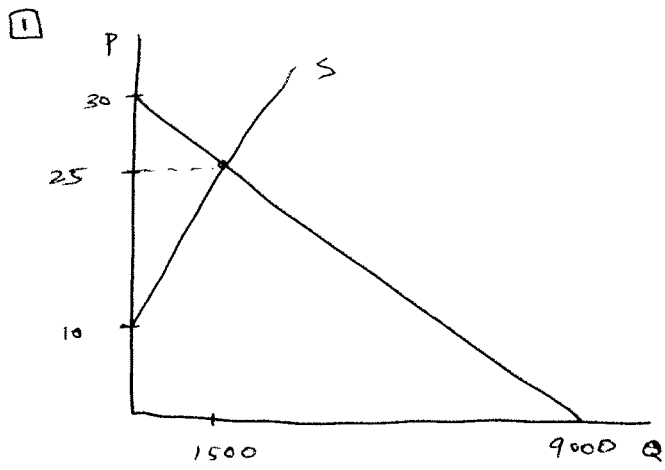
b)  $1000 - 50P = -200 + 100P$   
 $1200 = 150P$   
 $P^* = 8$   
 $Q^* = 600$

c)  $P_c = P_p + t$   
 $P_c = P_p + \frac{1}{2}$

$1000 - 50(P_p + 2) = -200 + 100P_p$   
 $1100 = 150P_p \quad P_p = 7.33 \quad P_c = 9.33$

PS 7 Key

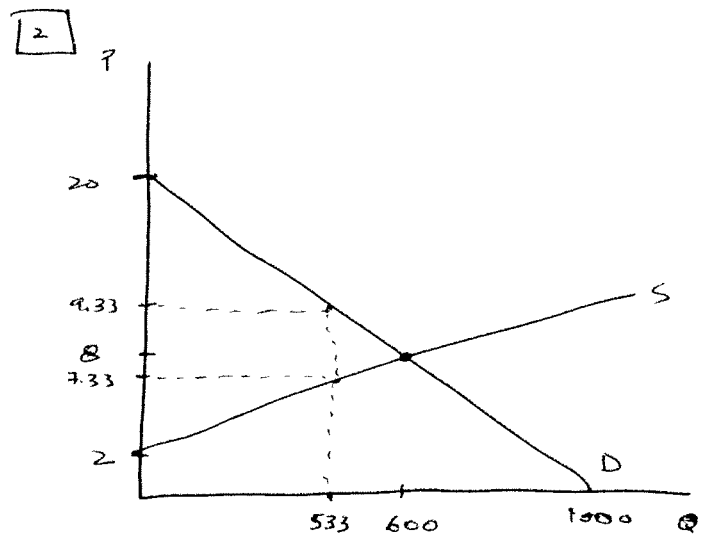
Smith  
Eco 202



b)  $9000 - 300P = -1000 + 100P$   
 $10,000 = 400P$   
 $P^* = 25$   
 $Q^* = 1500$

c)  $CS = \frac{1}{2} \cdot 5 \cdot 1500 = 3750$   
 $PS = \frac{1}{2} \cdot 15 \cdot 1500 = 11,250$

d)  $P = 10 \Rightarrow$  shuts down the market  
 Price ceiling.  
 excess demand  $\Rightarrow 6000 - 0 = 6000$   
 total loss of surplus  $\Rightarrow DWL = 14,000$



b)  $1000 - 50P = -200 + 100P$   
 $1200 = 150P$   
 $P^* = 8$   
 $Q^* = 600$

c)  $P_c = P_p + t$   
 $P_c = P_p + \frac{t}{2}$

$1000 - 50(P_p + 2) = -200 + 100P_p$

$1100 = 150P_p \quad P_p = 7.33 \quad P_c = 9.33$

2c]

Tax Revenue = 533 \* 2 = \$1066

DWL = 67 = 1/2 \* 2 \* 67

Tax share -> P\_c - P\* = 9.33 - 8 = 1.33  
P\* - P\_p = 8 - 7.33 = 0.67  
Consumer's share is larger.

d)

P\_c = P\_p (1 + T)

P\_c = P\_p (1.1)

1000 - 50(1.1P\_p) = -200 + 100P\_p

1200 = 155P\_p

P\_p = 7.74 P\_c = 8.51 Q\* = 574

Tax Revenue = .77 \* 574 = \$442

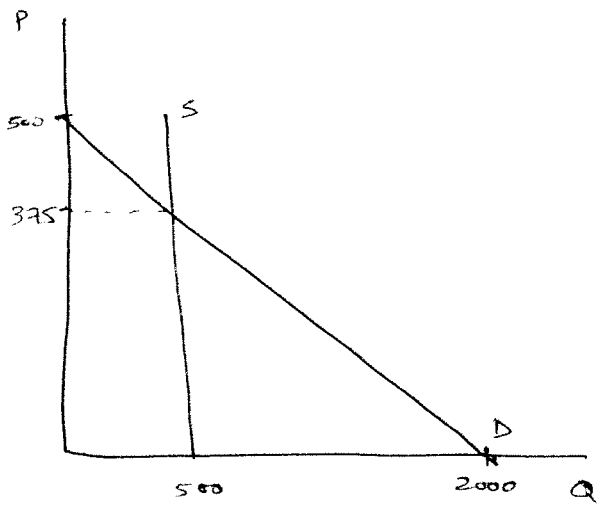
DWL = 1/2 \* .77 \* (26) = 10.01

Share of tax:

Consumer : 8.51 - 8 = .51

Producer : 8 - 7.74 = .26

3



Producer pays all of the tax.

b) 500 = 2000 - 4P

1500 = 4P

P\* = 375  
Q\* = 500

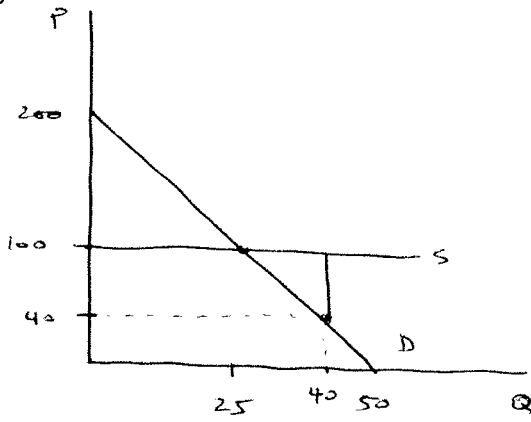
c) Q = 500 P\_p = 175

P\_c = 375

TR = 200 \* 500 = 10,000

No DWL.

4



$$\text{Subsidy Cost} = 60 \times 40 = 2400$$

$$\text{DWL} = \frac{1}{2} \cdot 60 \cdot 15 = 450$$

b)

$$Q^* = 25 \quad P^* = 100$$

c)

$$P_c = P_p - S$$

$$P_c = 40$$

$$P_c = 200 - 4Q$$

$$40 = 200 - 4Q$$

$$Q^* = 40$$

$$P_c = 40 \quad P_p = 100$$

5

a)

$$E_d = \left| -50 \cdot \frac{8}{600} \right| = \frac{2}{3} \rightarrow \text{more inelastic.}$$

$$E_s = 100 \cdot \frac{8}{600} = \frac{4}{3}$$

b)

$$E_d = \left| -4 \cdot \frac{375}{500} \right| = 3$$

$$E_s = \phi$$

c)

$$E_d = \left| -\frac{1}{4} \cdot \frac{100}{25} \right| = 1$$

$$E_s = \infty$$