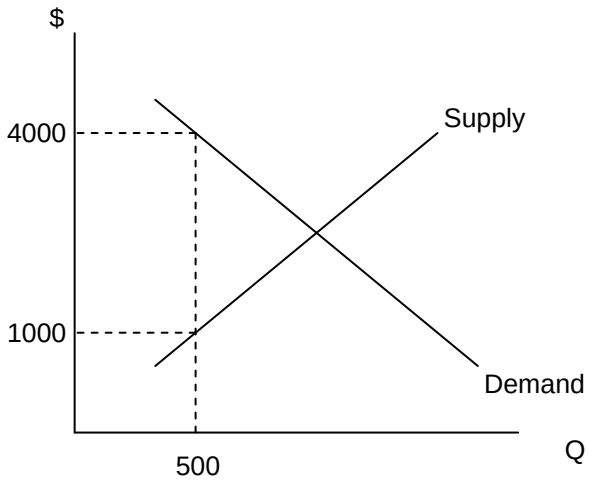
Exam 1
Notes on Solution

1a rent control in effect

w2p = 8000 - 8Q
w2a = 2Q

control = 1000

1000 = 2Q
Q = 500
w2p = 8000-8Q = 4000

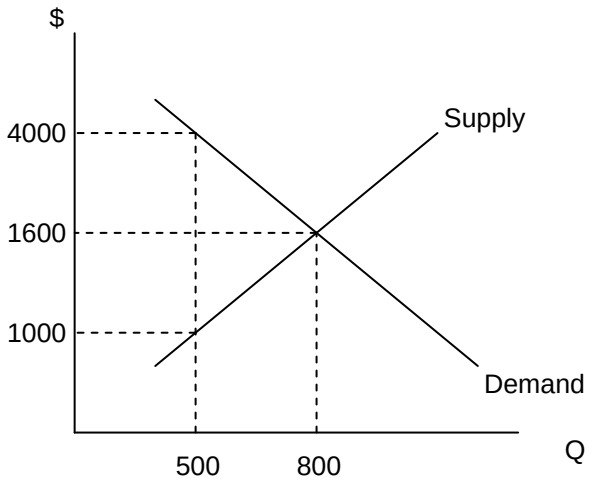


1b rent control removed

w2p = 8000 - 8Q
w2a = 2Q

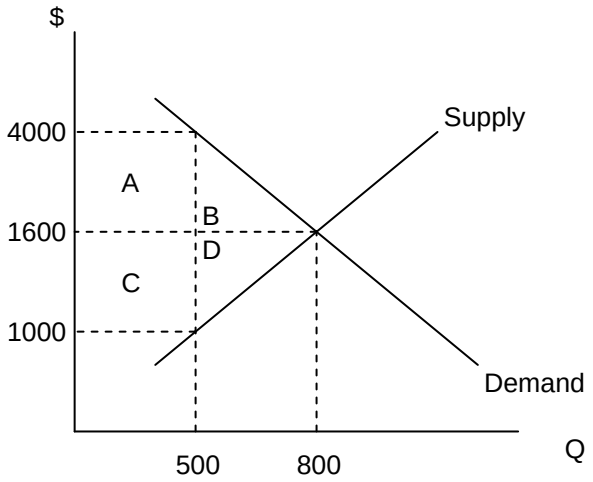
w2p = w2a
8000 - 8Q = 2Q
8000 = 10Q
Q = 800

w2p = 1600
w2a = 1600



demand elasticity = ((800-500)/500)/((1600-4000)/4000) = 60% / -60% = -1.0
supply elasticity = ((800-500)/500)/((1600-1000)/1000) = 60% / 60% = 1.0

1c changes in CS and PS



Change in CS = -C+B (Consumers get A either way)
Change in PS = +C+D

Total effect = +B+D

B = 360,000
C = 300,000
D = 90,000

Change in CS = 60,000
Change in PS = 390,000
Total change = 450,000 check: B+D = 450,000

Gainers and losers:

Consumers who were able to get an apartment while rent control was in effect lose C:
-300,000
Consumers who were NOT able to get an apartment while rent control was in effect gain B:
360,000
Producers gain C+D
390,000

2 Good A

Po = 100
Qo = 10 million
Elast= -4
Tax 10

Pct change in P= 10%
Pct change in Q= -40%

Qn = 6
Rev= 60 million
DWL= 20 million
DWL per dollar of revenue = 0.33

Good B

Po = 100
Qo = 5
Elast= -1
Tax 20

Pct change in P= 20%
Pct change in Q= -20%

Qn = 4
Rev= 80 million
DWL= 10 million
DWL per dollar of revenue = 0.13

Taxing good B is better: it generates an adequate amount of revenue and it generates less DWL in the process. This is reflected most clearly in the lower DWL per dollar of revenue.