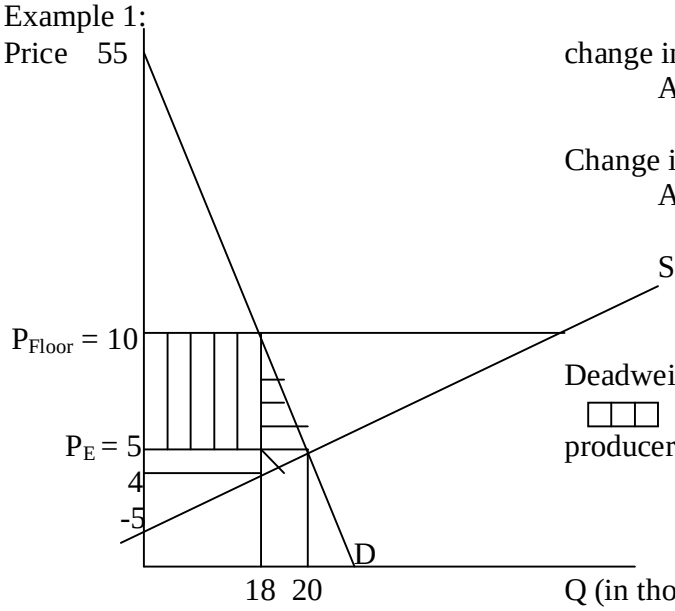
In class problems for chapter 9:

For the following two graphs: **show and calculate** a) the change in consumer surplus, b) the change in producer surplus, c) the deadweight loss from the price floor, and d) explain who are the "winners" and "losers" of the price control. Assume that producers will produce only the amount consumers will buy (and not the QS at the price floor).

Example 1:

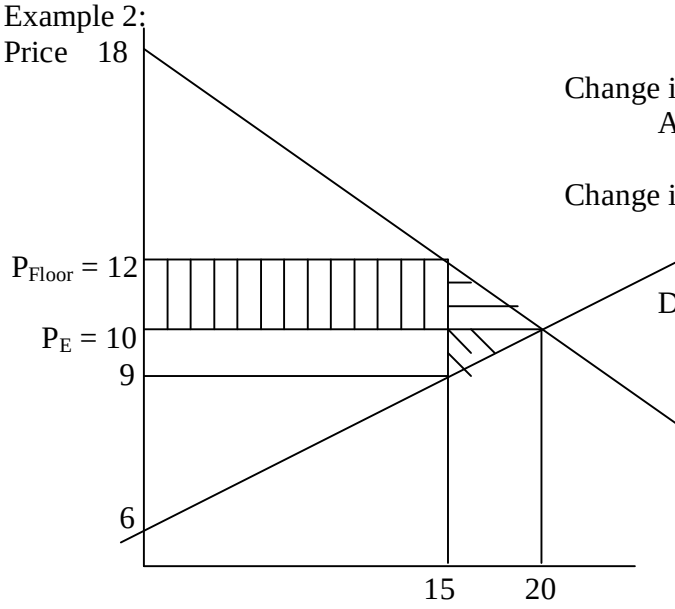


change in CS = lose (10 5)(18) = 90
And lose (½)(20-18)(10-5) = 5

Change in PS = gain (10 5)(18) = 90
And lose (½)(1)(20-18) = 1

Deadweight loss: lose in CS and PS (since Is transferred from consumers to producers; no "loss" here. So DWL = 6

Example 2:



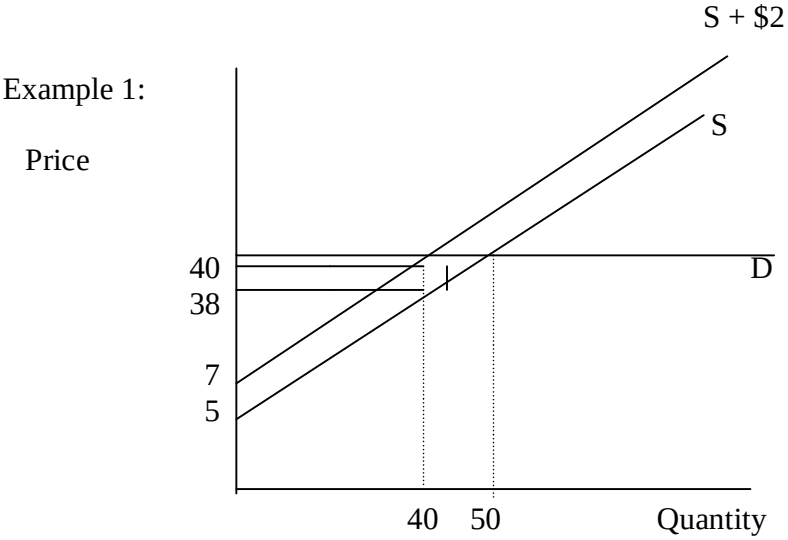
Change in CS = loss of (12-10)(15) = 30
And lose (½)(12-10)(20-15) = 5

Change in PS = gain of (12-10)(15) = 30
S and lose (½)(1)(20-15) = 2.5

Deadweight loss = 7.5

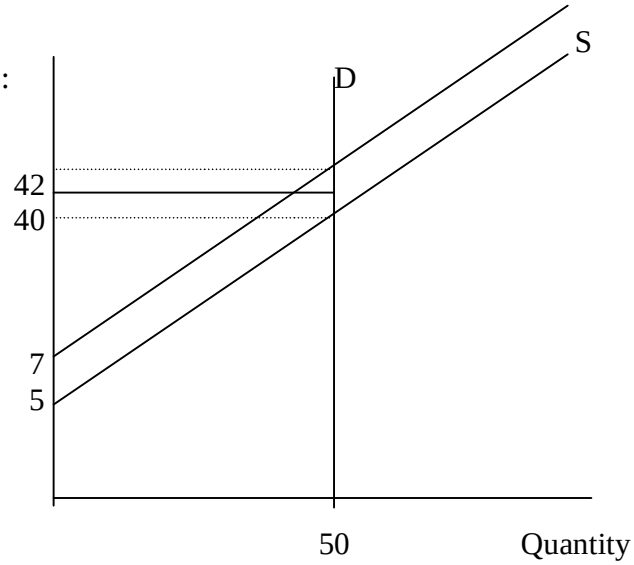
For the following two graphs, explain what happens to each good when the government adds a $2 tax. That is, **calculate and show** a) the deadweight loss, b) the tax revenue, c) the tax paid by consumers, and d) the tax paid by producers

Example 1:



a) DWL = ½ (50 − 40)(40 − 38) = 10
b) TR = (40 − 38)(40) = 80
c) $P_{consumers} = P_{eqm} = 40$, so consumers pay $0 of the tax
d) $P_{Producers} = 38$, and $P_{eqm} = 40$, so producers pay the entire $2 of the tax

Example 2:



a) no DWL
b) TR = (42 − 40)(50) = 100
c) $P_{consumers} = 42$ and $P_{eqm} = 40$, so consumers pay $2 of the tax
d) $P_{Producers} = P_{eqm} = 40$, so producers pay the $0 of the tax