

University of Wisconsin - Madison
Econ 101 – Spring 2007
Professor Meta Brown

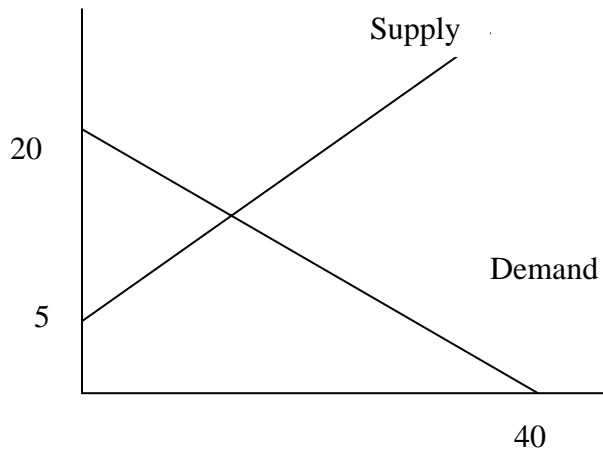
**Problem Set 4
Solution**

1.

- a. Quantity decreases and price increases.
- b. Quantity increases and price decreases.
- c. Quantity decreases and price decreases.

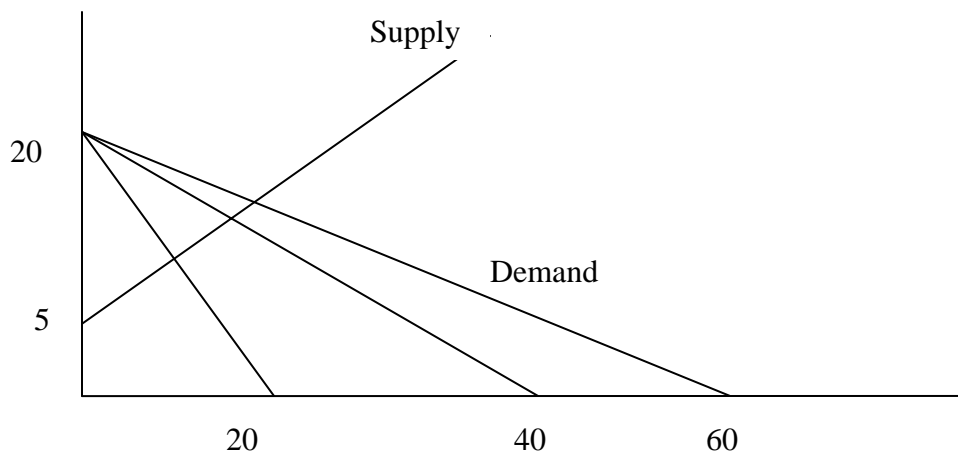
2.

a.



b. $40 - 2P = P - 5 \Rightarrow P = 15$. $Q = P - 5 = 15 - 5 = 10$.

c. $Q = 40 - 2P + 20 - P = 60 - 3P$



d. $60 - 3P = P - 5 \Rightarrow P = 65/4$. $Q = 65/4 - 5 = 45/4$

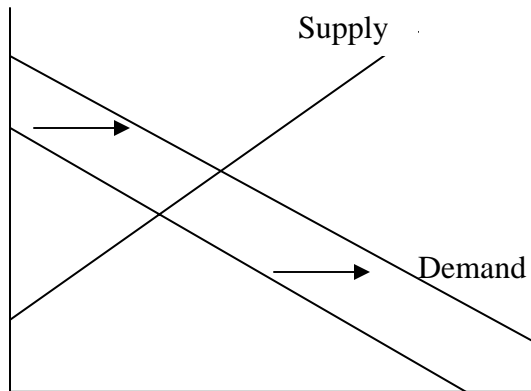
e. $65/4 > 15$. Thus, Nick is worse off.

3.

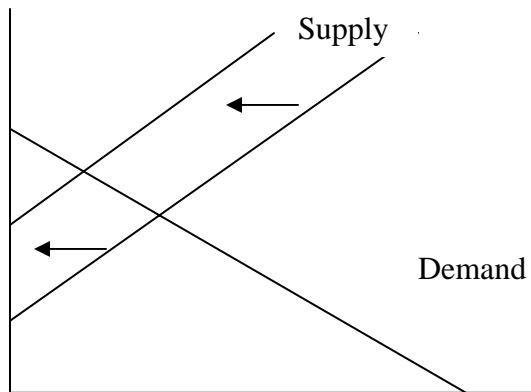
- a. Equation 1 is supply, Equation 2 is demand.
- b. $2P+18=60-5P \Rightarrow 7P=42 \Rightarrow P=6$.
- c. Demand= $60-5*3=45$. Supply= $2*3+18=24$. The demand will not be met.
- d. $Q=60-5P+18=78-5P$.
- e. $78-5P=2P+18 \Rightarrow 60=7P \Rightarrow P=60/7$

4.

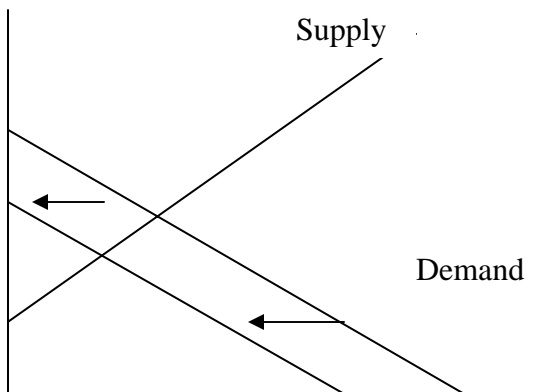
- a. Price increases. Quantity increases.



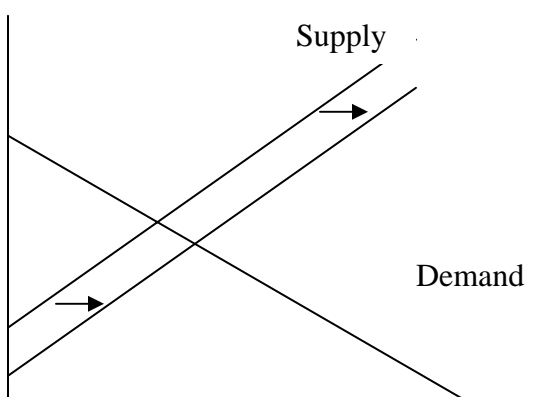
- b. Price increases. Quantity decreases.



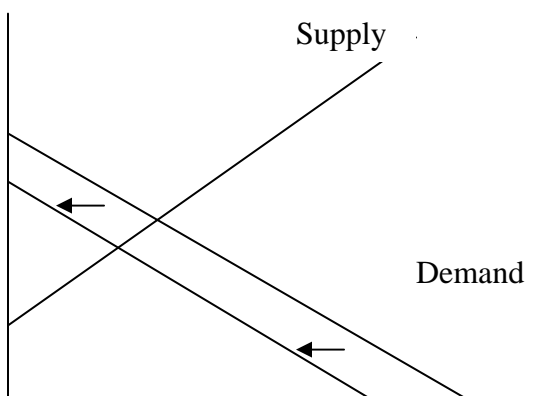
- c. Price decreases. Quantity decreases.



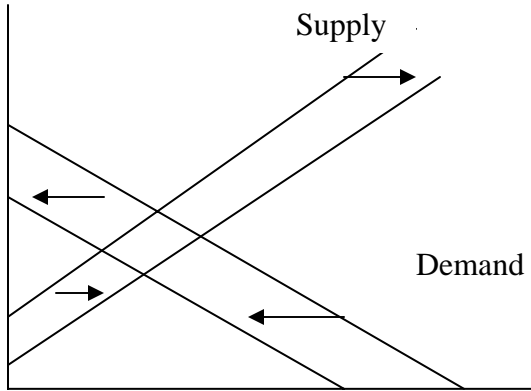
d. Price decreases. Quantity increases.



e. Price decreases. Quantity decreases.



f. Price decreases. Quantity is ambiguous.



g. Quantity decreases. Price is ambiguous.

