

HW#4 From Problem and Applications of Mankiw book, Chapter 4 The Market Forces of Supply and Demand

#1 Answer only part (b) and (e). Follow the instruction of the question and, in addition, and describe the market mechanism that causes the change in the market equilibrium.

3. Consider the market for minivans. For each of the events listed here, identify which of the determinants of demand or supply are affected. Also indicate whether demand or supply increases or decreases. Then draw a diagram to show the effect on the price and quantity of minivans.

~~a. People decide to have more children.~~

b. A strike by steelworkers raises steel prices.

~~c. Engineers develop new automated machinery for the production of minivans.~~

~~d. The price of sports utility vehicles rises~~

e. A stock market crash lowers people's wealth.

#

11. Suppose that the price of basketball tickets at your college is determined by market forces. Currently, the demand and supply schedules are as follows:

Price	Quantity Demanded	Quantity Supplied
\$4	10,000 tickets	8,000 tickets
8	8,000	8,000
12	6,000	8,000
16	4,000	8,000
20	2,000	8,000

- Draw the demand and supply curves. What is unusual about this supply curve? Why might this be true?
- What are the equilibrium price and quantity of tickets?
- Your college plans to increase total enrollment next year by 5,000 students. The additional students will have the following demand schedule:

Price	Quantity Demanded
\$4	4,000 tickets
8	3,000
12	2,000
16	1,000
20	0

Now add the old demand schedule and the demand schedule for the new students to calculate the new demand schedule for the entire college. What will be the new equilibrium price and quantity?

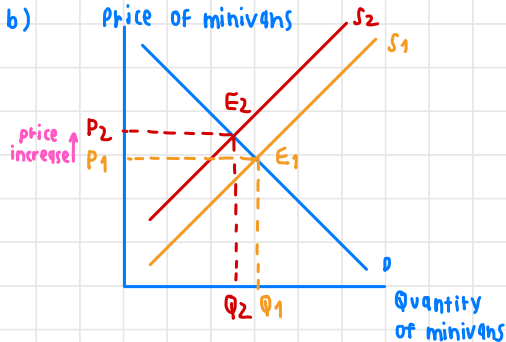
3. Consider the market for minivans. For each of the events listed here, identify which of the determinants of demand or supply are affected. Also indicate whether demand or supply increases or decreases. Then draw a diagram to show the effect on the price and quantity of minivans.

price & quantity of inputs

supply decreases

a. ~~People decide to have more children.~~

b. A strike by steelworkers raises steel prices.



When a strike by steelworkers raises steel prices (the cost of production increases), the supply will decrease (shift to the left).

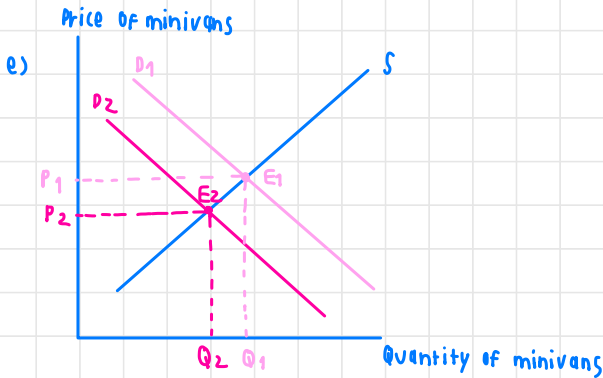
At the old equilibrium point (Q_1, P_1) , $Q_D = Q_S$. So, when the supply decrease from S_1 to S_2 , the $Q_S < Q_D$ means that the price of minivans will increase to P_2 until $Q_D = Q_S$ (point E_2) new equilibrium.

The Adjustment process from E_1 to E_2

At E_1 , $Q_D > Q_S$ (Excess demand) so, the price will increase to P_2 , and the quantity to Q_2 , the point E_2 is the new equilibrium point.

3. Consider the market for minivans. For each of the events listed here, identify which of the determinants of demand or supply are affected. Also indicate whether demand or supply increases or decreases. Then draw a diagram to show the effect on the price and quantity of minivans. **income**
demand decreases

- a. People decide to have more children.
- b. A strike by steelworkers raises steel prices.
- c. ~~Engineers develop new automated machinery for the production of minivans.~~
- d. ~~The price of sports utility vehicles rises~~
- e. A stock market crash lowers people's wealth.



If a stock market crash lower people's wealth, the demand of the minivans will decrease due to people will decrease their willingness to spend money. So, the demand curve will shift to the left from D_1 to D_2 .

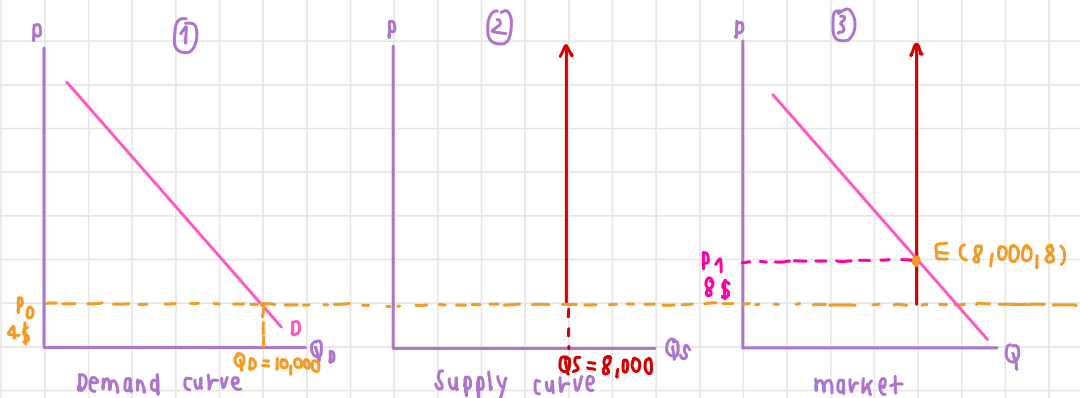
The Adjustment process from E_1 to E_2

At E_1 , $Q_D < Q_S$ (Excess Supply), so the quantity of minivans will keep lowering from Q_1 to Q_2 , so the price of minivans have to decrease to reduce Q_S .

At the new equilibrium point (E_2), (Q_2, P_2)

11. Suppose that the price of basketball tickets at your college is determined by market forces. Currently, the demand and supply schedules are as follows:

Price	Quantity Demanded	Quantity Supplied
\$4	10,000 tickets	8,000 tickets
8	8,000	8,000
12	6,000	8,000
16	4,000	8,000
20	2,000	8,000



a. Draw the demand and supply curves. What is unusual about this supply curve? Why might this be true?

The supply curve is the extreme case where its vertical supply in the graph number ②, this has the vertical graph because the seat in the stadium has limited at 8,000 seats

b. What are the equilibrium price and quantity of tickets?

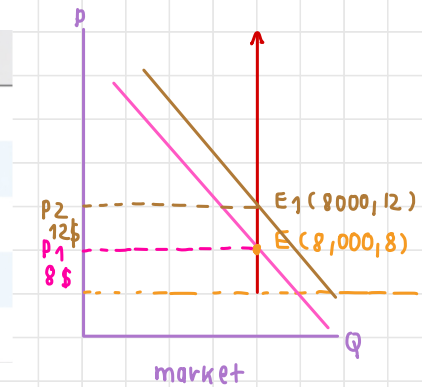
8\$ and 8,000 seats at point E in graph number ③

- c. Your college plans to increase total enrollment next year by 5,000 students. The additional students will have the following demand schedule:

Price	Quantity Demanded
\$4	4,000 tickets
8	3,000
12	2,000
16	1,000
20	0

Now add the old demand schedule and the demand schedule for the new students to calculate the new demand schedule for the entire college. What will be the new equilibrium price and quantity?

Price	Quantity Demanded	Quantity Supplied
\$4	10,000 tickets $+ 4,000 = 14,000$	8,000 tickets
8	8,000 $+ 3,000 = 11,000$	8,000
12	6,000 $+ 2,000 = 8,000$	8,000
16	4,000 $+ 1,000 = 5,000$	8,000
20	2,000	8,000



$\therefore$ The new equilibrium price will be \$12 and 8,000 seats at E_1 in the graph.