

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.

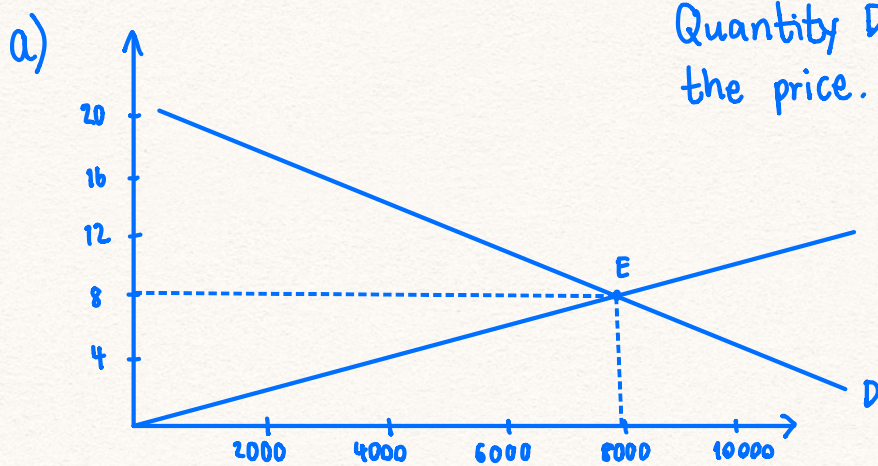
- ~~a. People decide to have more children.~~
- b. A strike by steelworkers raises steel prices.
- ~~c. Engineers develop new automated machinery for the production of minivans.~~
- ~~d. The price of sports utility vehicles rises~~
- e. A stock market crash lowers people's wealth.

#

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 |

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



Quantity Demanded is changed according to the price. If P is lower, Q_D will higher. } Opposite direction
 P is higher, Q_D will lower. }
 but the Q_S is still the same because the tickets are limited.

b) $\bar{P} = 8$
 $\bar{Q} = 8000$

from 5000 students

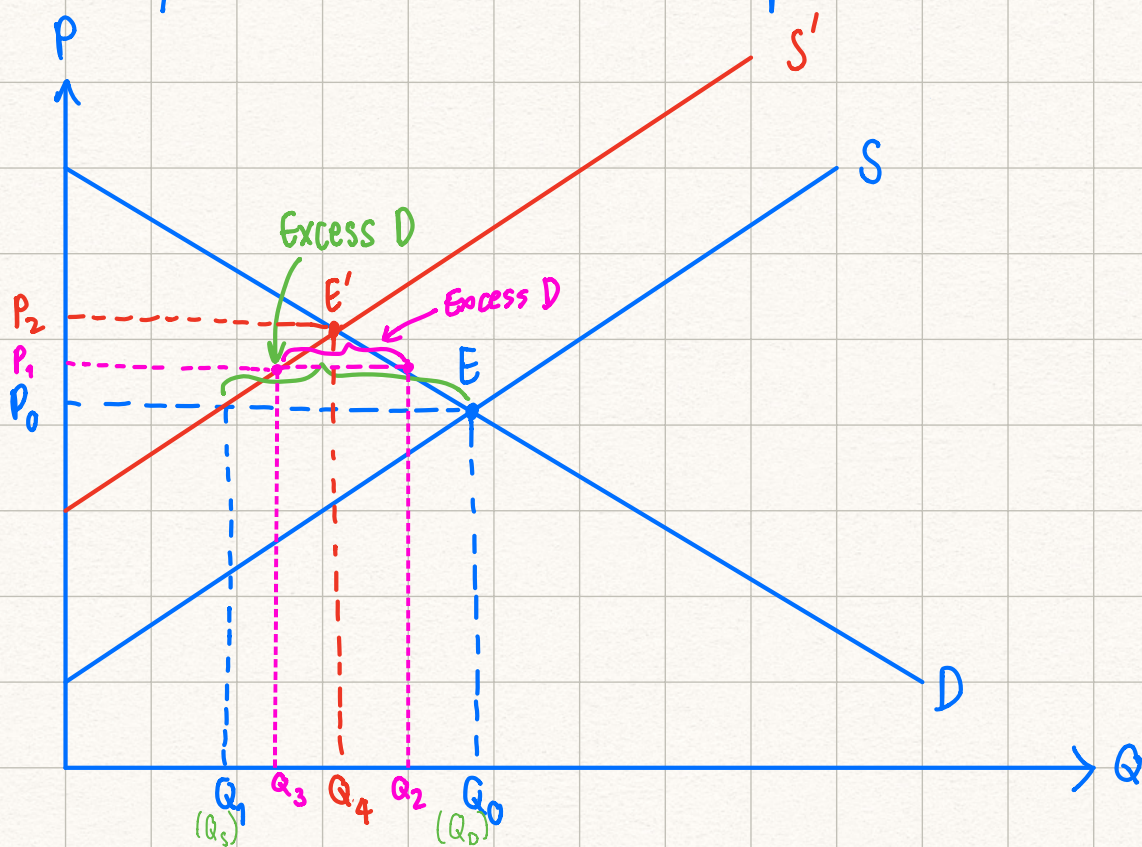
| Price | Quantity Demanded | Q_s |
|-------|---------------------|-------|
| \$4 | 4,000 tickets + 10k | 8000 |
| 8 | 3,000 + 8k | 8000 |
| 12 | 2,000 + 6k | 8000 |
| 16 | 1,000 + 4k | 8000 |
| 20 | 0 + 2k | 8000 |

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?

The new equilibrium price is 12 \$

The new equilibrium quantity is 8000.

b) A strike by steelworkers raises steel prices.



Initially the Eq. is at $E = (Q_0, P_0)$

when have a strike that makes S decreases to S'
at the market price P_0 with the new lower S ,

We have $\text{Excess D.} = Q_0 - Q_1 > 0$

The market price increases from P_0 to P_1

At Price P_1 , Q_s increases from Q_1 to Q_3

Q_d decreases from Q_0 to Q_2

There are still an $\text{Excess D.} = Q_2 - Q_3 > 0$ but less than
the one at P_0 .

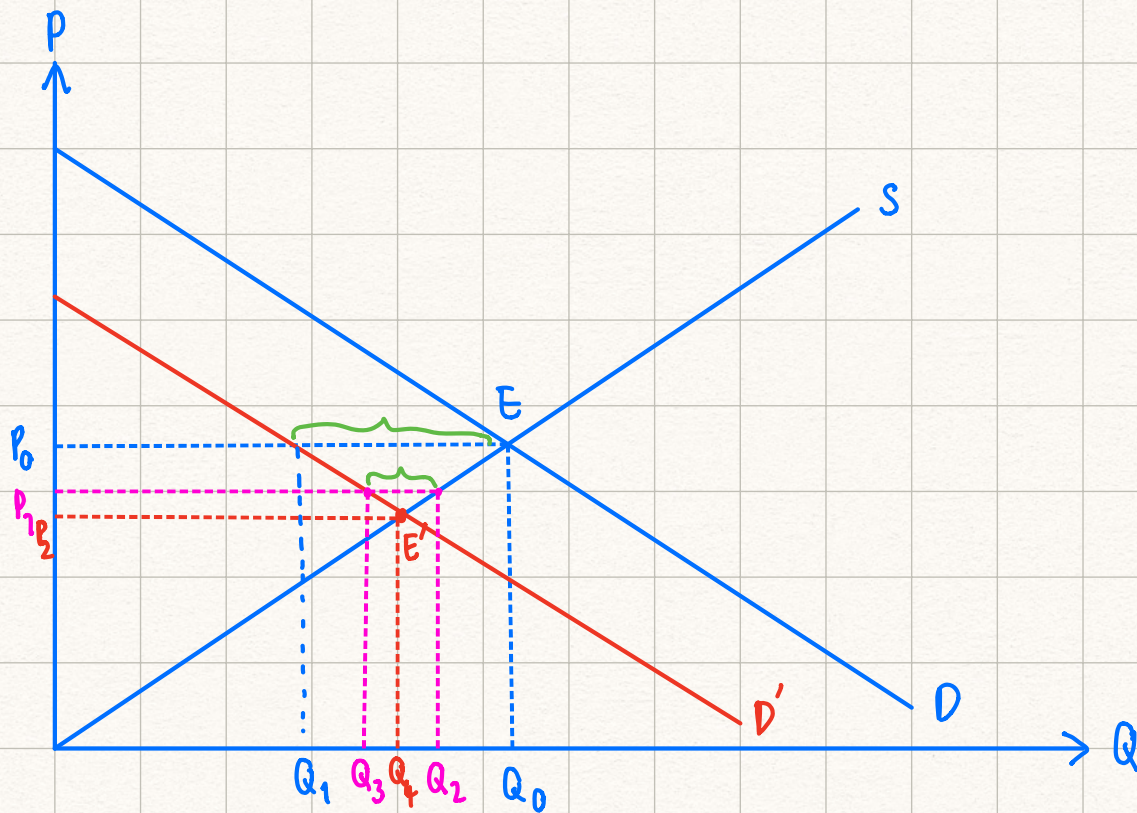
The price keep increasing untill it reaches to P_2 where
there is no Excess D.

And E' is the new Eq. where $Q_D = Q_S$ or Excess $D = 0$.

∴ Eq. P increases from P_0 to P_2

Eq. Q decreases from Q_0 to Q_4

e) A stock market crash lowers people's wealth



Initially, the Eq. is at $E = (Q_0, P_0)$

When a stock market crash lower people's wealth that makes

Demand decreases from D to D'

At the market price P_0 with the new lower D ,

there is Excess $S = Q_0 - Q_1 > 0$

then the price decrease from P_0 to P_1

At Price P_1 , Q_D decrease from Q_0 to Q_3

Q_S decrease from Q_0 to Q_2

There is still Excess $S = Q_2 - Q_3 > 0$

The Price keep decreasing until it reaches P_2

and E' is the new Eq. where $Q_D = Q_S$ or Excess $S = 0$

∴ Eq. Price decreases from P_0 to P_2

Eq. Quantity decreases from Q_0 to Q_4 .

