

MICROECONOMICS: HOMEWORK PROBLEMS – ANSWER KEY

Chapter 2: Problems and Applications

5.
 - a. A family's decision about how much income to save is related to microeconomics.
 - b. The effect of government regulations on auto emissions is related to microeconomics.
 - c. The impact of higher saving on economic growth is related to macroeconomics.
 - d. A firm's decision about how many workers to hire is related to microeconomics.
 - e. The relationship between the inflation rate and changes in the quantity of money is related to macroeconomics.

6.
 - a. The statement that society faces a short-run tradeoff between inflation and unemployment is a positive statement. It deals with how the economy *is*, not how it should be. Since economists have examined data and found that there is a short-run negative relationship between inflation and unemployment, the statement is a fact, thus it is a positive statement.
 - b. The statement that a reduction in the rate of growth of money will reduce the rate of inflation is a positive statement. Economists have found that money growth and inflation are very closely related. The statement thus tells how the world is, and so it is a positive statement.
 - c. The statement that the Federal Reserve should reduce the rate of growth of money is a normative statement. It states an opinion about something that should be done, not how the world is.
 - d. The statement that society ought to require welfare recipients to look for jobs is a normative statement. It does not state a fact about how the world is. Instead, it is a statement of how the world should be and is thus a normative statement.
 - e. The statement that lower tax rates encourage more work and more saving is a positive statement. Economists have studied the relationship between tax rates and work, as well as the relationship between tax rates and saving. They have found a negative relationship in both cases. So the statement reflects how the world is, and is thus a positive statement.

Chapter 4:
Problems and Applications

3. a. If people decide to have more children, they will want larger vehicles for hauling their kids around, so the demand for minivans will increase. Supply will not be affected. The result is a rise in both the price and the quantity sold, as Figure 12 shows.

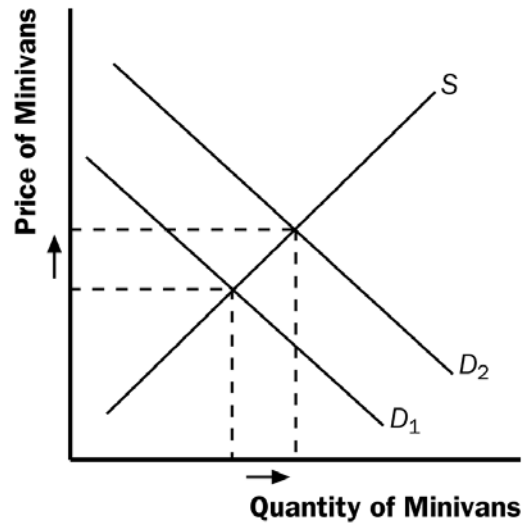


Figure 12

- b. If a strike by steelworkers raises steel prices, the cost of producing a minivan rises and the supply of minivans decreases. Demand will not be affected. The result is a rise in the price of minivans and a decline in the quantity sold, as Figure 13 shows.

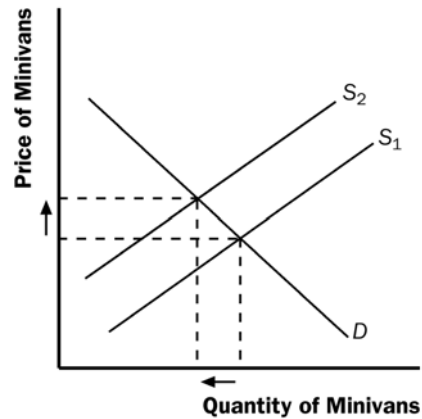


Figure 13

- c. The development of new automated machinery for the production of minivans is an improvement in technology. This reduction in firms' costs will result in an increase in supply. Demand is not affected. The result is a decline in the price of minivans and an increase in the quantity sold, as Figure 14 shows.

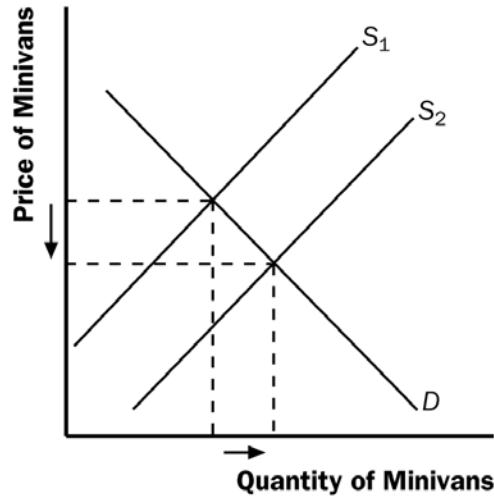


Figure 14

- d. The rise in the price of sport utility vehicles affects minivan demand because sport utility vehicles are substitutes for minivans. The result is an increase in demand for minivans. Supply is not affected. The equilibrium price and quantity of minivans both rise, as Figure 12 shows.
- e. The reduction in peoples' wealth caused by a stock-market crash reduces their income, leading to a reduction in the demand for minivans, because minivans are likely a normal good. Supply is not affected. As a result, both the equilibrium price and the equilibrium quantity decline, as Figure 15 shows.

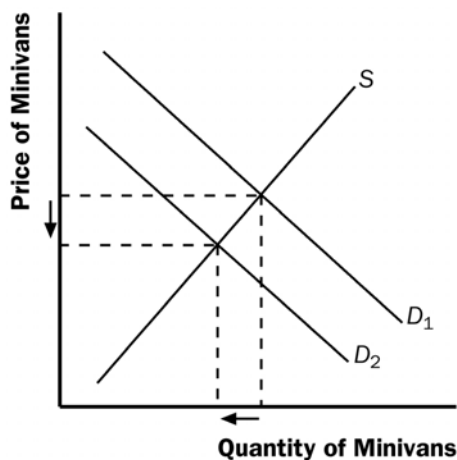


Figure 15

14. a. As Figure 33 shows, the supply curve is vertical. The constant quantity supplied makes sense because the basketball arena has a fixed number of seats at any price.

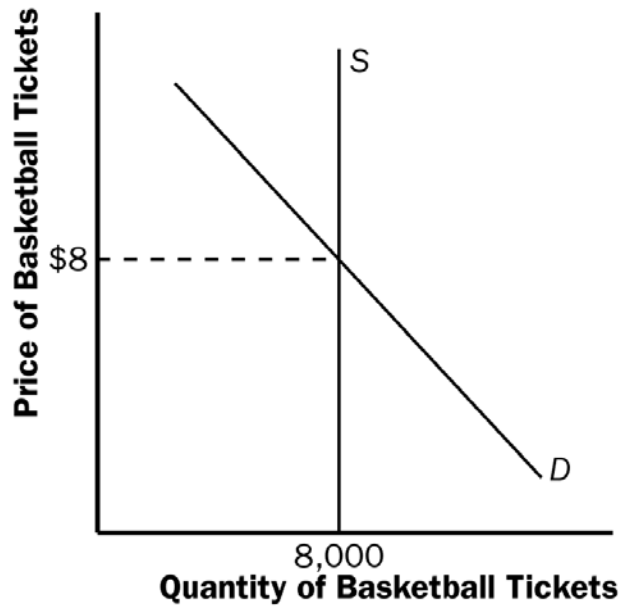


Figure 33

- b. Quantity supplied equals quantity demanded at a price of \$8. The equilibrium quantity is 8,000 tickets.
- c.

Price	Quantity Demanded	Quantity Supplied
\$4	14,000	8,000
\$8	11,000	8,000
\$12	8,000	8,000
\$16	5,000	8,000
\$20	2,000	8,000

The new equilibrium price will be \$12, which equates quantity demanded to quantity supplied. The equilibrium quantity remains 8,000 tickets.

Chapter 5:
Problems and Applications

2. a. For business travelers, the price elasticity of demand when the price of tickets rises from \$200 to \$250 is $[(2,000 - 1,900)/1,950]/[(250 - 200)/225] = 0.05/0.22 = 0.23$. For vacationers, the price elasticity of demand when the price of tickets rises from \$200 to \$250 is $[(800 - 600)/700] / [(250 - 200)/225] = 0.29/0.22 = 1.32$.
- b. The price elasticity of demand for vacationers is higher than the elasticity for business travelers because vacationers can choose more easily a different mode of transportation (like driving or taking the train). Business travelers are less likely to do so because time is more important to them and their schedules are less adaptable.
6. a. If your income is \$10,000, your price elasticity of demand as the price of compact discs rises from \$8 to \$10 is $[(40 - 32)/36]/[(10 - 8)/9] = 0.22/0.22 = 1$. If your income is \$12,000, the elasticity is $[(50 - 45)/47.5]/[(10 - 8)/9] = 0.11/0.22 = 0.5$.
- b. If the price is \$12, your income elasticity of demand as your income increases from \$10,000 to \$12,000 is $[(30 - 24)/27]/[(12,000 - 10,000)/11,000] = 0.22/0.18 = 1.22$. If the price is \$16, your income elasticity of demand as your income increases from \$10,000 to \$12,000 is $[(12 - 8)/10]/[(12,000 - 10,000)/11,000] = 0.40/0.18 = 2.2$.