

Chapter 3 Review Questions
Supply and Demand
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Mostly True/False; you should be able to provide an explanation of why a false statement is false. An answer of “False” would be marked wrong on an exam if no explanation were provided, or if the explanation was wrong.

- _____ 1. The circular flow diagram would classify the Pittsburgh Symphony as a firm.
True – they produce a service, and sell it in the goods and services market.
(Non-profits can be firms too)
- _____ 2. In the circular flow diagram, factors of production are traded in the product market.
False - they are traded in factor markets.
- _____ 3. Labor is demanded by firms in a factor market.
True.
- _____ 4. A fall in the price of iPads would shift the demand curve for iPads to the right.
False – there would be a movement along the demand curve.
Only a change in something other than the price of the good itself shifts a curve.
- _____ 5. As the price of a product falls, the quantity demanded of that product will increase, other things equal.
True – this simply states the law of demand.
- _____ 6. According to the law of demand, there is a positive relation between price and the quantity demanded.
False – the relation is negative or inverse.
- _____ 7. If the demand for potatoes increases as income decreases, economists would consider potatoes as an _____ good.
Inferior.
- _____ 8. If the demand for eggs decreases as the price of bacon increases, economists would consider eggs and bacon as _____.
Complements
- _____ 9. Economists consider income a “stock” measure, and wealth a “flow” measure.
False – income is the monthly flow, savings from which result in a stock of wealth.
- _____ 10. An increase in income will increase the demand for all goods.
False – it will increase the demand for normal goods, but decrease the demand for inferior goods.
- _____ 11. A supply curve shows the minimum price producers are willing to charge.
True
- _____ 12. The supply curve will shift upwards on a graph if the prices of inputs into production go up.
True – if the price of inputs goes up, producers will require a higher minimum price at any given quantity.

(Draw graph below) 13. A demand curve can be written in general terms as

$$Q_d = 0.1 * \text{Income} - 20 P$$

Draw a graph for the demand curves at Income = \$ 10,000 and at Income = \$ 30,000

Be sure to have the axes labeled and also indicate the points at which the demand curves cross the vertical and horizontal axes.

The demand curve at \$ 10,000 will be $Q_d = 1000 - 20 P$

or $P = 50 - 1/20 Q_d$

It will run from 50 on the vertical price axis to 1000 on the horizontal quantity axis.

The demand curve at \$ 30,000 will be $Q_d = 3000 - 20 P$

or $P = 150 - 1/20 Q_d$

It will run from 150 on the vertical price axis to 3000 on the horizontal quantity axis.

_____ 14. If income were \$ 10,000, and if the supply curve were $Q_s = 30 P$, the equilibrium price would be _____. (show calculations below)

$$Q_d = Q_s \text{ (Equilibrium condition)}$$

$$1000 - 20 P^* = 30 P^*$$

$$50 P^* = 1000$$

$$P^* = \$ 20$$

Note: the star on the price denotes the equilibrium price.

_____ 15. If income were \$ 10,000 and if the supply curve were $Q_s = 30 P$, the equilibrium quantity would be _____. (show calculations below).

Substitute the equilibrium price of 20 into either the demand or supply equation.

$$Q_d^* = 1000 - 20 (20) = 600$$

$$Q_s^* = 30 (20) = 600$$

_____ 16. If income were \$ 30,000, and if the supply curve were $Q_s = 20 P$, the equilibrium price would be _____. (show calculations below)

$$Q_d = Q_s \text{ (Equilibrium condition)}$$

$$3000 - 20 P^* = 20 P^*$$

$$40 P^* = 3000$$

$$P^* = \$ 75$$

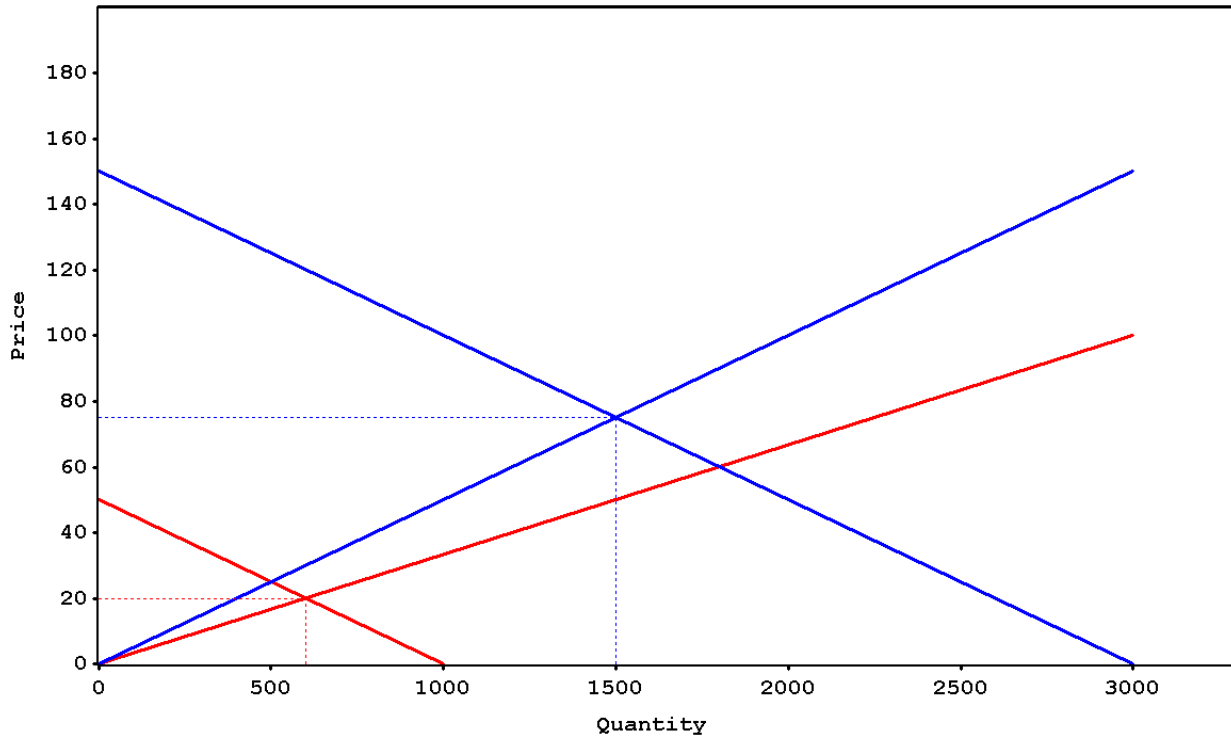
_____ 17. If income were \$ 30,000 and if the supply curve were $Q_s = 20 P$, the equilibrium quantity would be _____. (show calculations below).

Substitute $P^* = 75$ into the supply equation to get $Q_s^* = 20 * 75 = 1500$

Substitute $P^* = 75$ into the demand equation to get $Q_d^* = 3000 - 20 * 75 = 3000 - 1500 = 1500$

_____ 18. Illustrate the situation in questions 14-17 by a graph, with the questions 14-15 situation shown as a solid line (below, in RED) and the questions 16-17 situation shown in BLUE lines.

Shifts of Demand and Supply



_____ 19. As a result of the changes in questions 14-18, the equilibrium price increases. (T/F)
True, from \$ 20 to \$ 75

_____ 20. As a result of the changes in questions 14-18, the equilibrium quantity increases (T/F)
True, from 600 to 1500

_____ 21. The change from questions 14-15 to 16-17 can be described as an increase in supply combined with an decrease in demand (T/F)
False – demand increases and supply decreases.

_____ 22. Whenever supply decreases and demand increases, both price and quantity necessarily increase (T/F, and explain carefully)

Price and quantity both increased in this case, but in general, price will go up but quantity be uncertain.

_____ 23. The good described in questions 14-18 is an inferior good (T/F and explain)

False – when income increases, demand for the good increases, so it is a normal good.