Solutions to Problems

CHAPTER 1

1.1 Answers will vary, but should include the notion that each activity provides benefits in the form of satisfaction or additional income, but also takes time away from the pursuit of other activities (opportunity cost). Time spent on each activity is limited because the additional benefit of devoting an extra unit of time to any one activity falls as more time is devoted to the activity. Hence, as more and more time is spent on one activity, it will become increasingly attractive to devote the next unit of time to some other activity.

1.2 The average cost is \$8 (\$80 / 10). The marginal cost is \$0.

1.3 (a) From the standpoint of Amnesty International, Julia is free. From Julia's standpoint, she gives up the time she could have spent searching for a new job as well as other uses of her time, even though she does not give up wages.

(b) The €1million could have been invested in other blue chip pharmaceutical companies or profit-making ventures, or it could have been put in the bank or loaned to someone else with interest.

(c) The other goods and services or investments that Andrea could buy with \$2,000.

(d) The other uses of time or the foregone wages he could have earned had Karl chosen to take the metro.

(e) The wages José will forego in a few years' time because of not having a degree and a better-paying job.

(f) The cost of the flowers and pots, as well as the time Magdalena is giving up that could be used for other activities.

(g) The service provider's wages which Marta is giving up that could have been spent on other goods and services or investments.

1.4 Jack does face scarcity because resources are limited. A person's net worth does not change the fact that everyone faces scarcity. Consider one of our most important resources — time. There are only 24 hours in a day, and everyone, including Jack, must live their lives under this constraint, making decisions about how to spend this time.

1.5 Jeff Bezos does face scarcity because resources are limited. A person's net worth does not change the fact that everyone faces scarcity. Consider one of our most important resources— time. There are only 24 hours in a day, and everyone, including Bezos, must live their lives under this constraint, making decisions about how to spend this time.

1.6 Answers will vary depending on the occupations chosen.

2.1 Answers will vary.

2.2 (a) This is an example of a microeconomic concern since it addresses a potential change in operations for a particular industry.

(b) This is an example of a macroeconomic concern since it addresses a potential change in marginal tax rates that would affect the entire nation.

(c) This is an example of a microeconomic concern since it addresses wages for a specific firm in a specific industry.

(d) This is an example of a macroeconomic concern since it addresses a change in unemployment benefits, which affects the whole economy.

3.1 Answers will vary.

3.2 (a) positive

(b) positive

(c) normative

(d) positive

(e) normative

3.3 (a) Each state should allow the market to provide what people want. Since smoking marijuana is not mandatory, only those who want to partake will do so. Tax revenues that arise from the purchase of recreational marijuana are paid voluntarily.

(b) Some argue that using marijuana is associated with reduced productivity that has a cost to the community at large. In addition, marijuana is considered by some to be addictive and can lead to the use of harder drugs. These concerns bear on the efficiency argument to the extent that there are costs from marijuana use that are not reflected in the price of marijuana. These costs could potentially affect the community at large (e.g., the social cost of addiction) or the individual (to the extent that marijuana use creates an unwanted addiction).

(c) Legalized marijuana has a number of fairness issues around it. First, a lot of people believe marijuana is not harmful and can provide desired benefits, and they want to receive these benefits. But many consider marijuana use to be bad and disagree with its legalization. A big fairness issue is that people who use marijuana may become addicted to it and possibly addicted to even harder drugs. Like many other issues of its kind there are positives and negatives from the fairness side. Equity arguments are always the subject of disagreement.

(d) Tax revenue would likely fall in those states that had legalized marijuana use prior to its legalization in all 50 states. For those states that just legalized marijuana use, tax revenues would likely rise.

3.4 Answers will vary.

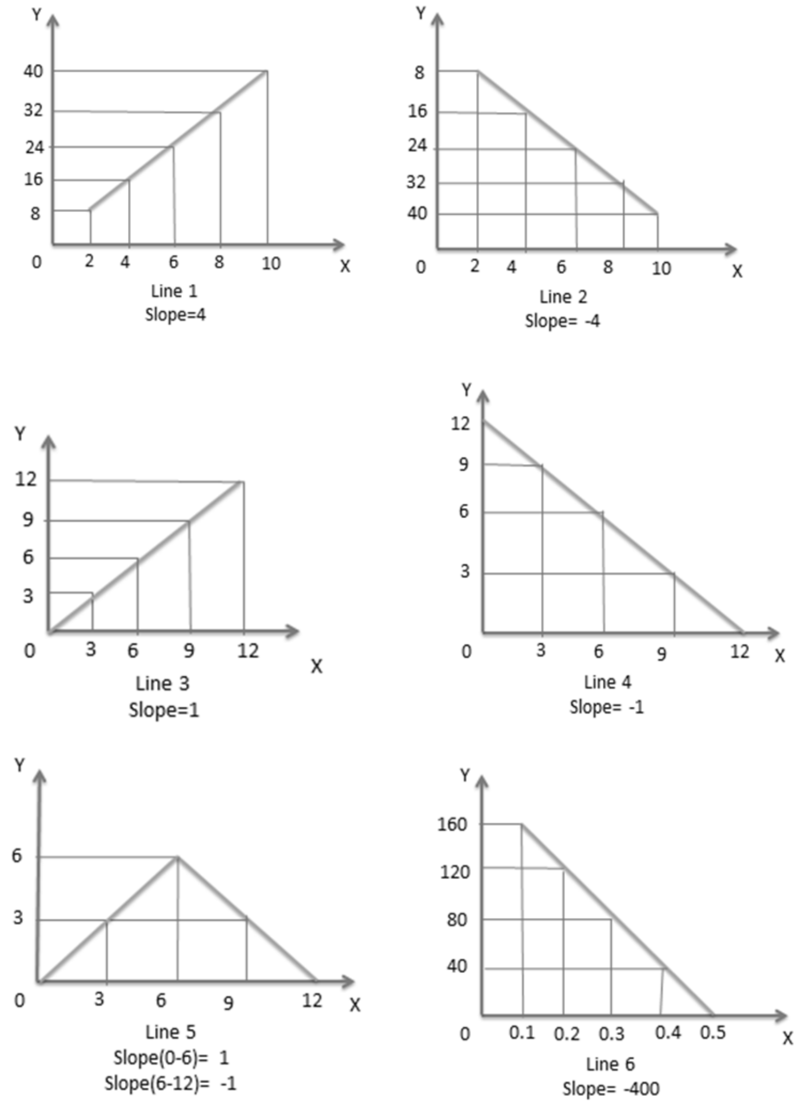
3.5 (a) This statement confuses correlation and causation. There is most likely a correlation between people who own a luxury car and also play golf, since both are indicators of wealth and a luxurious lifestyle, but owning a car is not the cause of people playing golf.

(b) This statement is an example of the post hoc fallacy. Just because Oscar took a shower after buying new shares of a company's stock and the stock price increased, this does not mean that Oscar showering caused the stock price to increase.

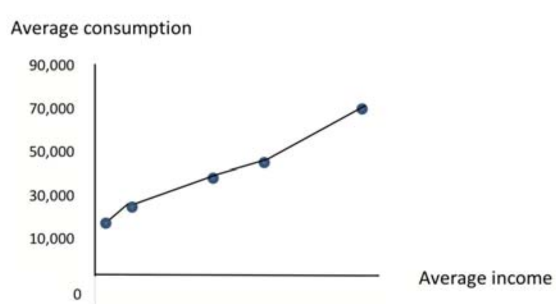
(c) This statement is an example of the fallacy of composition, which is the erroneous belief that what is true for a part is necessarily true for the whole. Requiring Cindy to attend tutorial classes for all subjects would waste resources on those subjects that Cindy is already good at, and would not be a good use of her time.

CHAPTER 1 APPENDIX

1A.1. The slopes are as follows: line 1: 4; line 2: –4; line 3: 1; line 4: –1; line 5: slope is 1 as X goes from 0 to 6, and –1 as X goes from 6 to 12; line 6: –400.

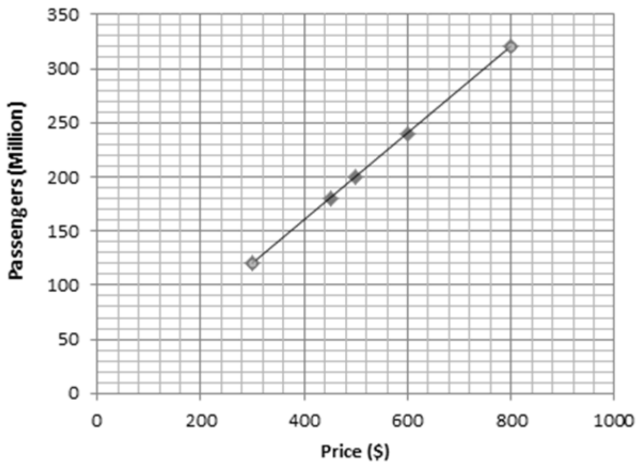


1A.2 There is a positive relationship between income and consumption.



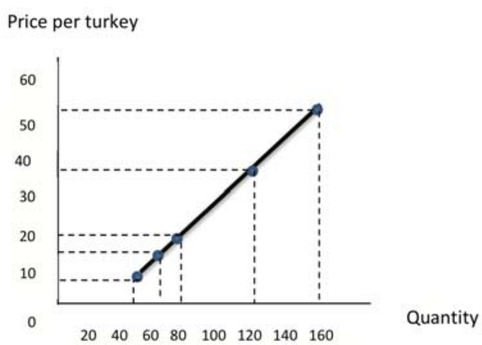
1A.3. (a) The relationship between the price of air tickets from London to New York and the number of passengers is a positive relationship because as the price increases, the quantity sold increases.

(b) The slope of the line is equal to 0.4.



1A.4 (a) The relationship between the price of turkeys and the quantity of turkeys sold by Godfrey's Free-Range Gobblers is a positive relationship because as the price increases, the quantity sold increases.

(b) The slope of the line is equal to 0.4.



(c) At point *A*, the tangent line runs through the points (p = 34, q = 20) and (p = 24, q = 45). The slope is therefore (34 – 24) / (20 – 45) = 10 / –25 = –0.4.

At point B, the tangent line runs through the points (p = 12, q = 90) and (p = 5, q = 140). The slope is therefore (12 – 5) / (90 – 140) = 7 / –50 = –0.14.