

Chapter 2

Thinking Like an Economist



The Economist as a Scientist

The role of assumptions

- Assumptions

- Can simplify the complex world and make it easier to understand
- The art in scientific thinking: deciding which assumptions to make

- Different assumptions

- To answer different questions
- To study short-run or long-run effects

The Economist as a Scientist

- Economic models
 - Diagrams and equations
 - Omit many details
 - Allow us to see what's truly important
 - Built with assumptions
 - Simplify reality to improve our understanding of it

Figure 1 The Circular Flow

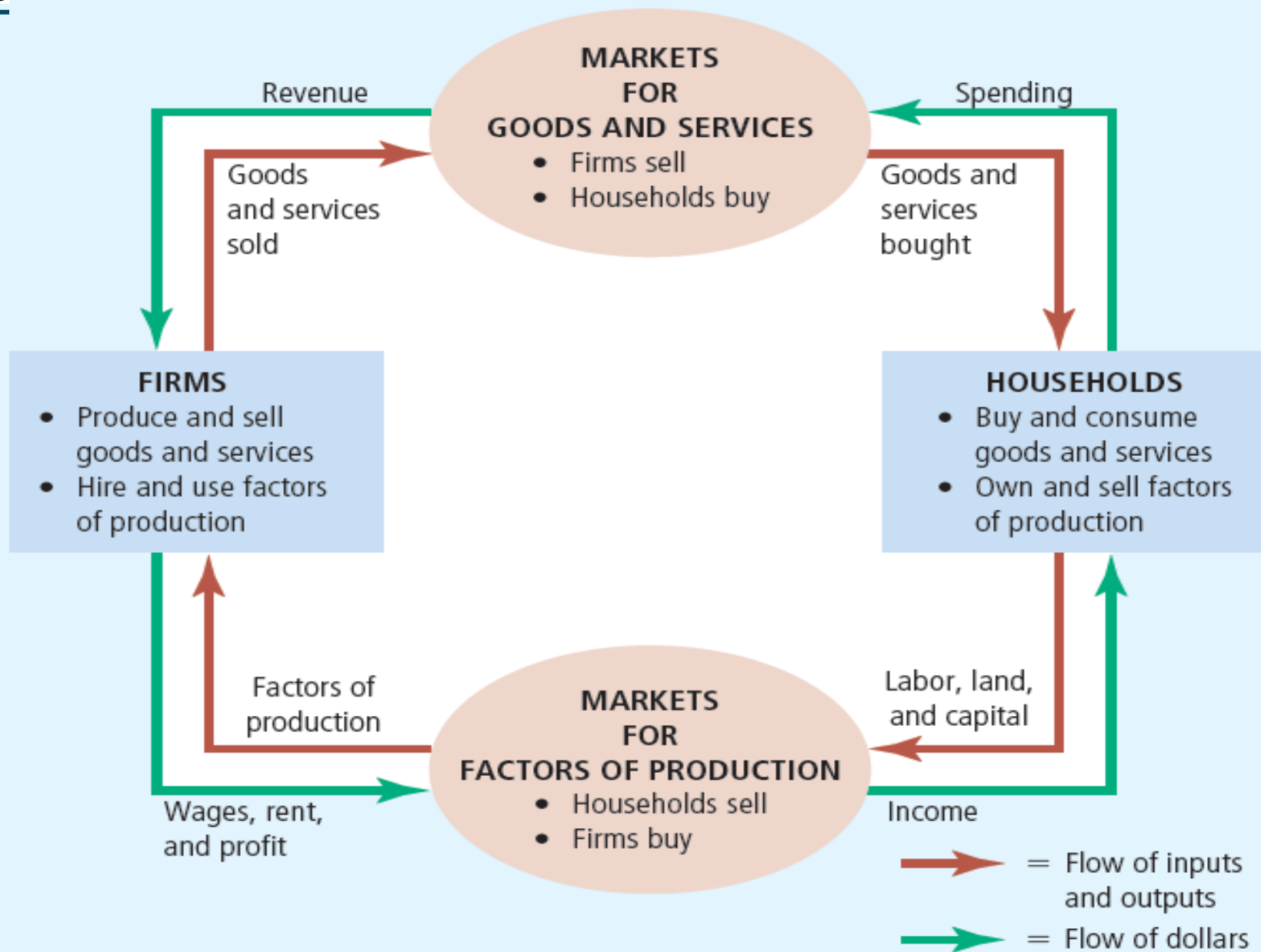


Figure 2 The Production Possibilities Frontier

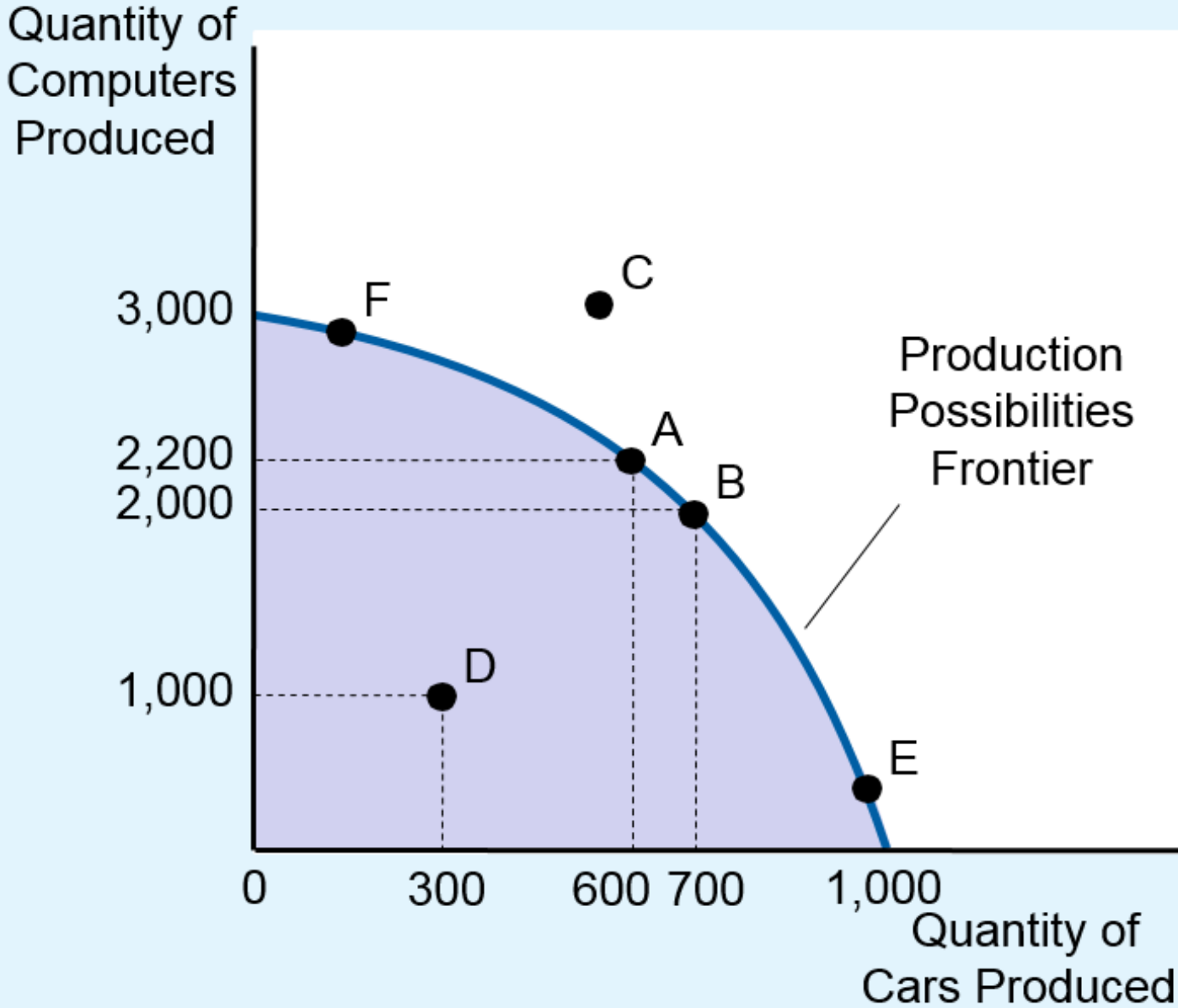


Figure 3 A Shift in the Production Possibilities Frontier

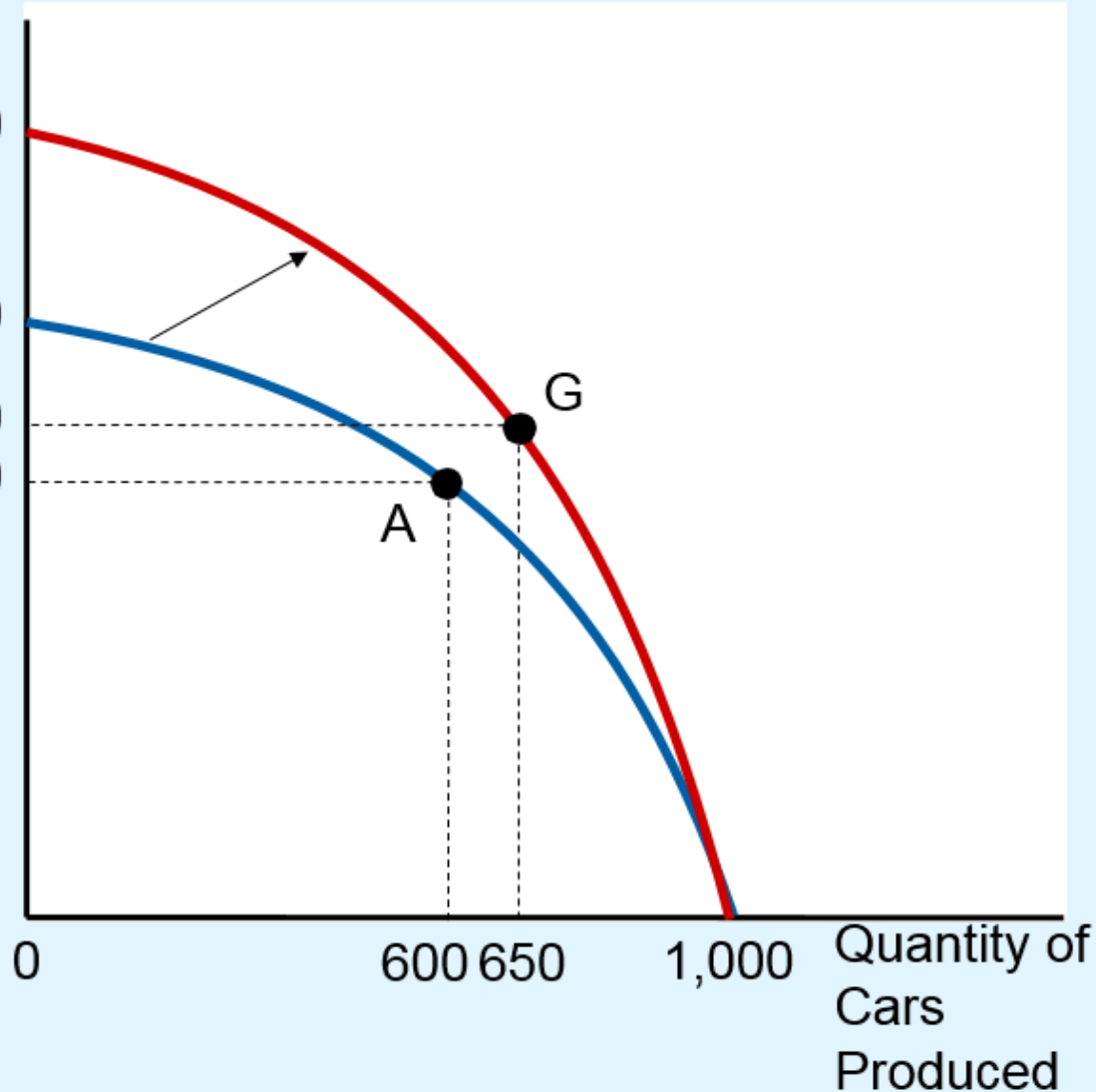
Quantity of
Computers
Produced

4,000

3,000

2,300

2,200



Micro vs Macro

- **Microeconomics**

- The study of how households and firms make decisions and how they interact in markets

- **Macroeconomics**

- The study of economy-wide phenomena, including inflation, unemployment, and economic growth

Positive vs Normative

- **Positive statements: descriptive**
 - Attempt to describe the world as it is
 - Confirm or refute by examining evidence:
“Minimum-wage laws cause unemployment”
- **Normative statements: prescriptive**
 - Attempt to prescribe how the world should be: “The government should raise the minimum wage”

Why Economists Disagree?

- Economists may disagree
 - Validity of alternative **positive** theories about how the world works
- Economists may have different values
 - Different **normative** views about what policy should try to accomplish

Why Economists Disagree

Differences in scientific judgments

- Validity of alternative theories
- Size of important parameters
 - Measure how economic variables are related

Why Economists Disagree

Differences in values

- Jack and Jill – take the same amount of water from the town well
 - Jill's income = \$150,000
 - Tax = \$15,000 (10%)
 - Jack's income = \$40,000
 - Tax = \$6,000 (15%)

ASK THE EXPERTS

Ticket Resale

“Laws that limit the resale of tickets for entertainment and sports events make potential audience members for those events worse off on average.”

What do economists say?

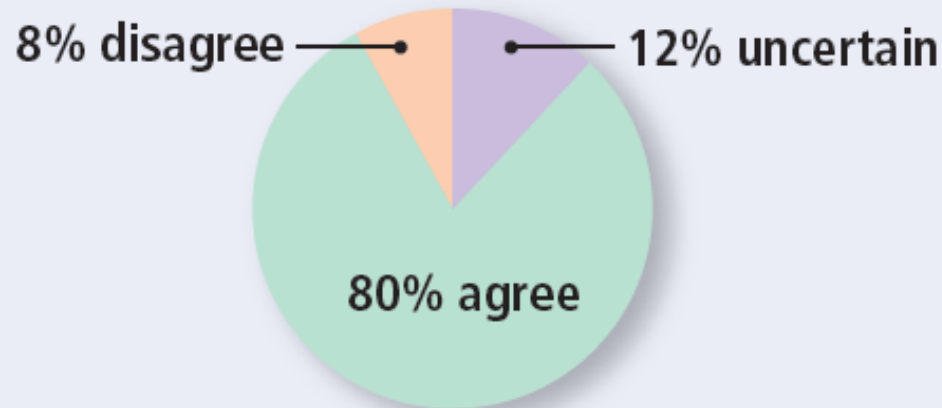


Table 1 Propositions about Which Most Economists Agree, Part 1

Proposition (and percentage of economists who agree)

1. A ceiling on rents reduces the quantity and quality of housing available. (93%)
2. Tariffs and import quotas usually reduce general economic welfare. (93%)
3. Flexible and floating exchange rates offer an effective international monetary arrangement. (90%)
4. Fiscal policy (for example, tax cut and/or government expenditure increase) has a significant stimulative impact on a less than fully employed economy. (90%)
5. The United States should not restrict employers from outsourcing work to foreign countries. (90%)
6. Economic growth in developed countries like the United States leads to greater levels of well-being. (88%)
7. The United States should eliminate agricultural subsidies. (85%)
8. An appropriately designed fiscal policy can increase the long-run rate of capital formation. (85%)
9. Local and state governments should eliminate subsidies to professional sports franchises. (85%)
10. If the federal budget is to be balanced, it should be done over the business cycle rather than yearly. (85%)

Table 1

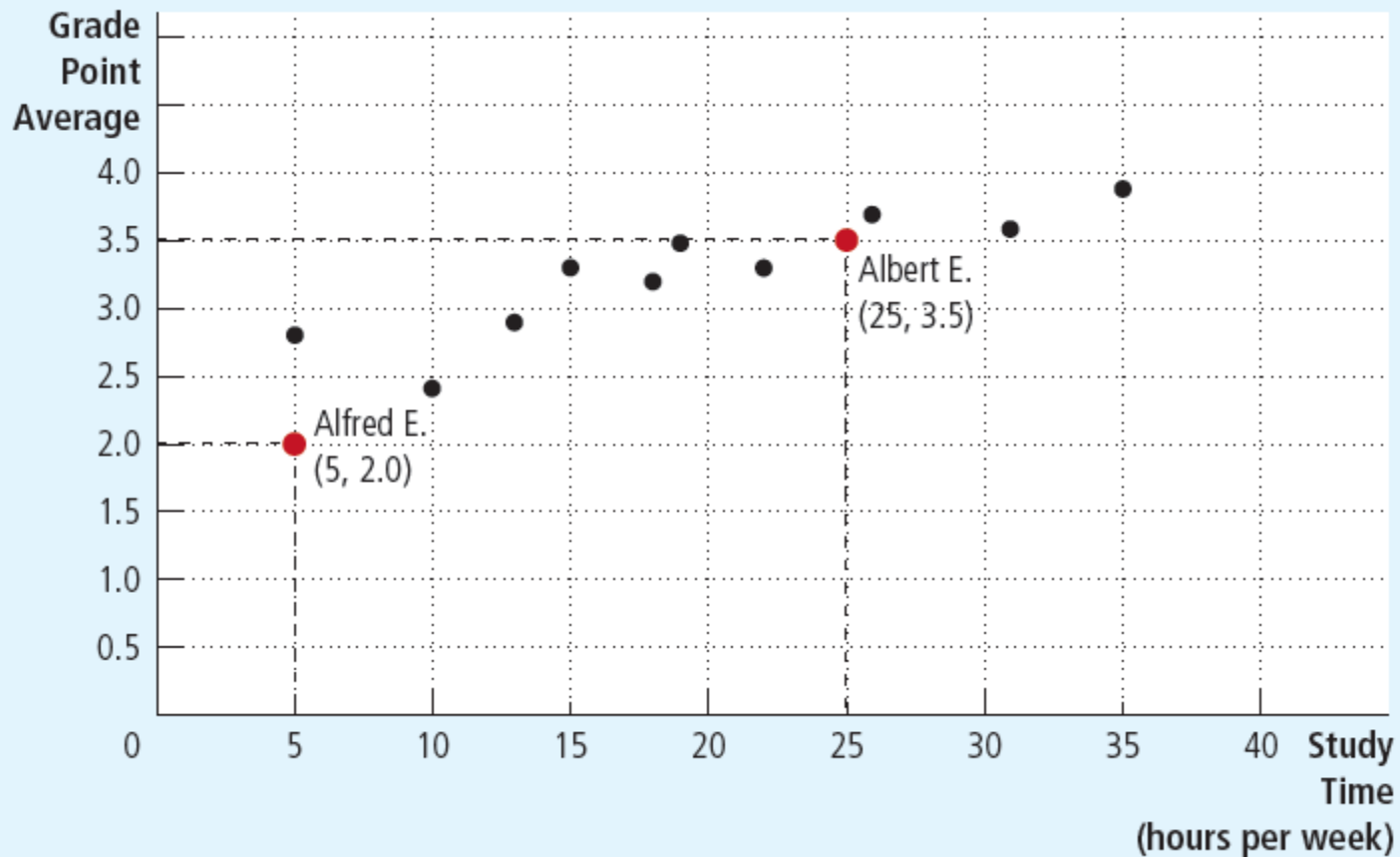
Propositions about Which Most Economists Agree, Part 2

11. The gap between Social Security funds and expenditures will become unsustainably large within the next 50 years if current policies remain unchanged. (85%)
12. Cash payments increase the welfare of recipients to a greater degree than do transfers-in kind of equal cash value. (84%)
13. A large federal budget deficit has an adverse effect on the economy. (83%)
14. The redistribution of income in the United States is a legitimate role for the government. (83%)
15. Inflation is caused primarily by too much growth in the money supply. (83%)
16. The United States should not ban genetically modified crops. (82%)
17. A minimum wage increases unemployment among young and unskilled workers. (79%)
18. The government should restructure the welfare system along the lines of a “negative income tax.” (79%)
19. Effluent taxes and marketable pollution permits represent a better approach to pollution control than the imposition of pollution ceilings. (78%)
20. Government subsidies on ethanol in the United States should be reduced or eliminated. (78%)

Appendix Graphing: A Brief Review

- Graphs of two variables: the coordinate system
 - Display two variables on a single graph
 - Scatterplot
 - Ordered pairs of points
 - x-coordinate
 - Horizontal location
 - y-coordinate
 - Vertical location

Figure A-2 Using the Coordinate System

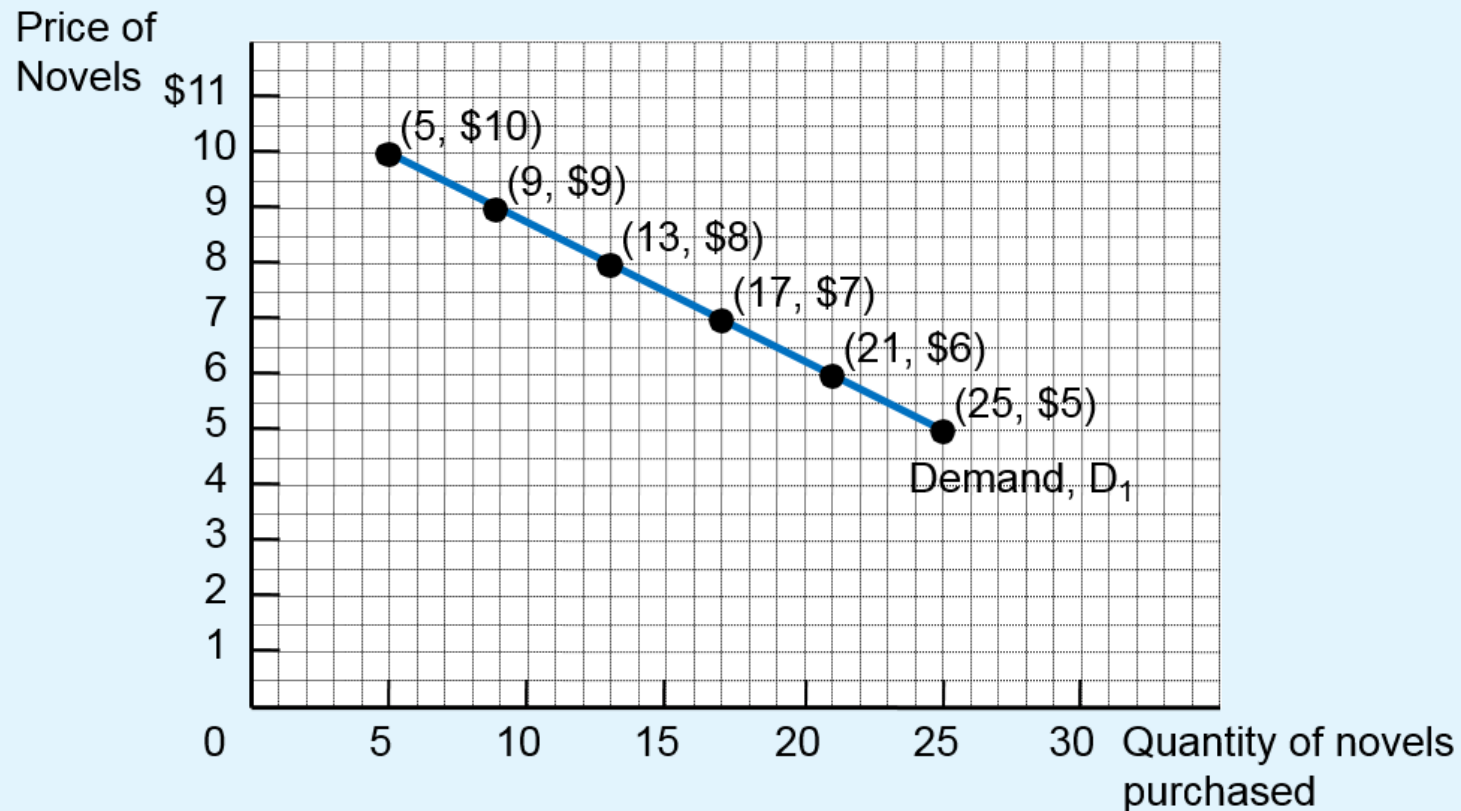


Grade point average is measured on the vertical axis and study time on the horizontal axis. Albert E., Alfred E., and their classmates are represented by various points. We can see from the graph that students who study more tend to get higher grades.

Appendix Graphing: A Brief Review

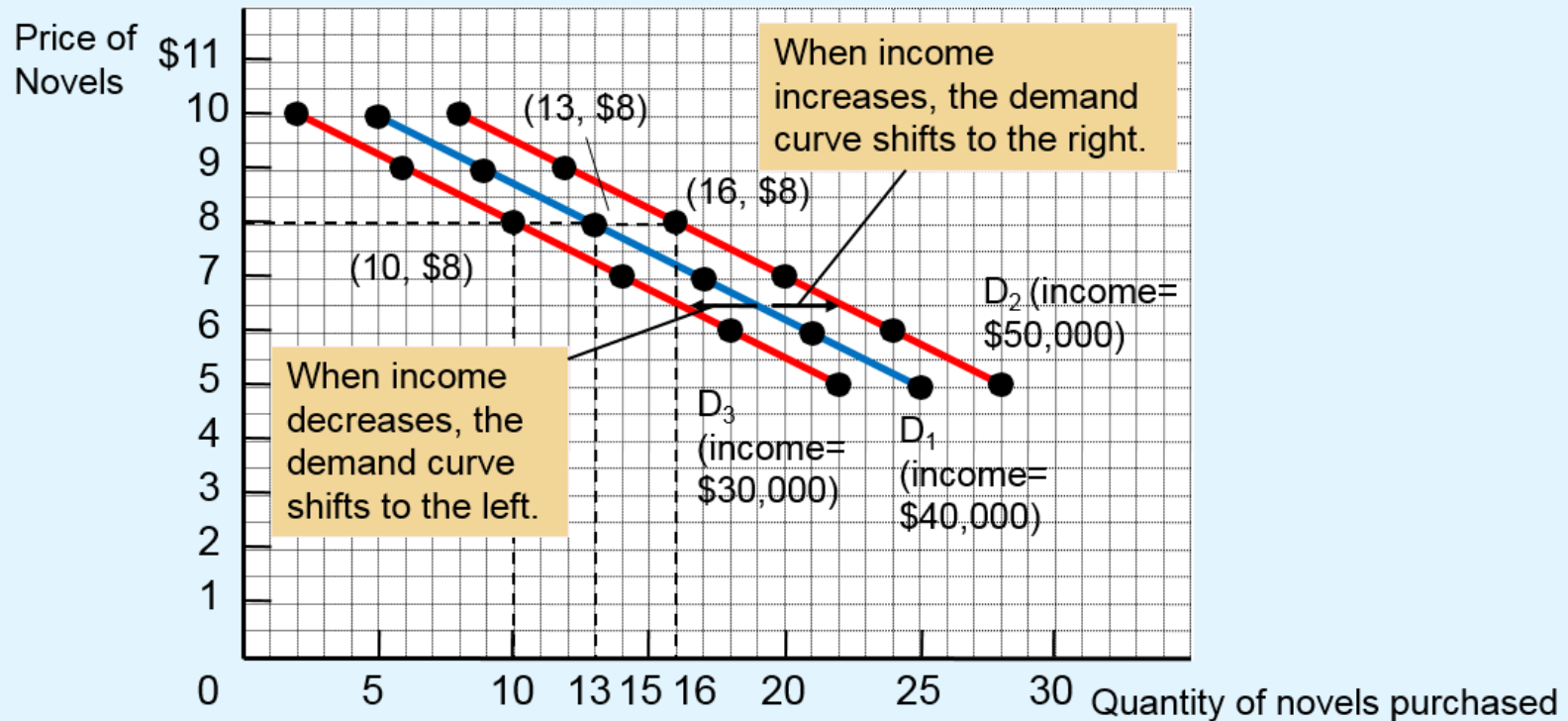
- **Negatively related variables**
 - The two variables move in opposite direction
 - Downward sloping curve
- **Positively related variables**
 - The two variables move in the same direction
 - Upward sloping curve
- **Movement along a curve**
- **Shifts in a curve**

Figure A-3 Demand Curve



The line D_1 shows how Emma's purchases of novels depend on the price of novels when her income is held constant. Because the price and the quantity demanded are negatively related, the demand curve slopes downward.

Figure A-4 Shifting Demand Curves



The location of Emma's demand curve for novels depends on how much income she earns. The more she earns, the more novels she will purchase at any given price, and the farther to the right her demand curve will lie. Curve D_1 represents Emma's original demand curve when her income is \$40,000 per year.

If her income rises to \$50,000 per year, her demand curve shifts to D_2 .

If her income falls to \$30,000 per year, her demand curve shifts to D_3 .

Appendix Graphing: A Brief Review

- Slope

- Ratio of the vertical distance covered
- To the horizontal distance covered
- As we move along the line
 - Δ (delta) = change in a variable
 - The “rise” (change in y) divided by the “run” (change in x).

$$\textit{Slope} = \frac{\Delta y}{\Delta x}$$

Appendix Graphing: A Brief Review

- Slope

- Fairly flat upward-sloping line

- Slope is a small positive number

- Steep upward-sloping line

- Slope is a large positive number

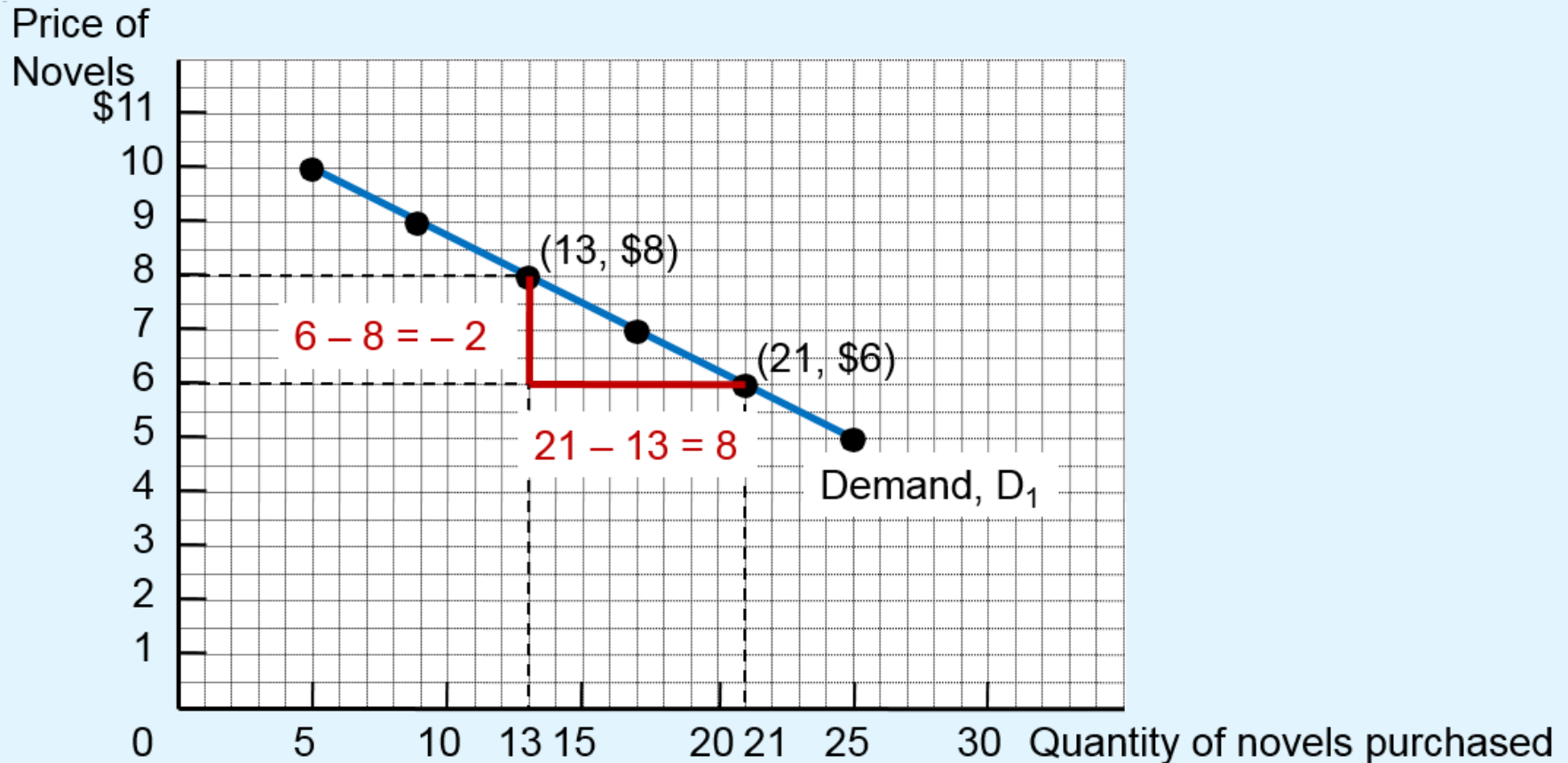
- Downward sloping line

- Slope is a negative number

- Horizontal line: slope is zero

- Vertical line: infinite slope

Figure A-5 Calculating the Slope of a Line

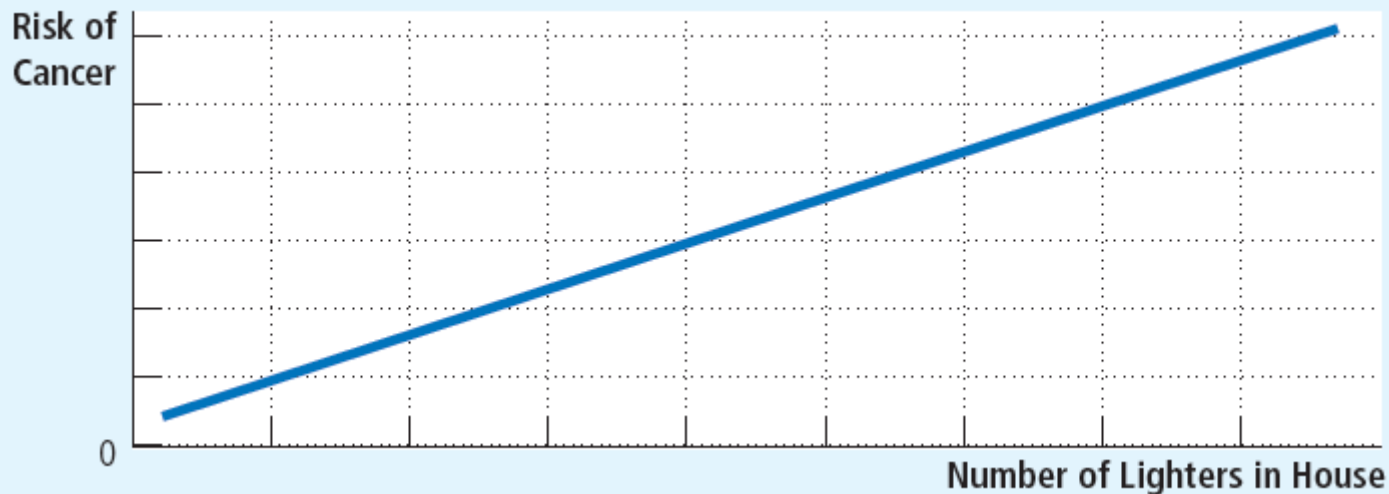


To calculate the slope of the demand curve, we can look at the changes in the x - and y -coordinates as we move from the point (21 novels, \$6) to the point (13 novels, \$8). The slope of the line is the ratio of the change in the y -coordinate (-2) to the change in the x -coordinate ($+8$), which equals $-1/4$.

Appendix Graphing: A Brief Review

- Cause and effect
 - One set of events
 - Causes another set of events
 - Omitted variables
 - Lead to a deceptive graph

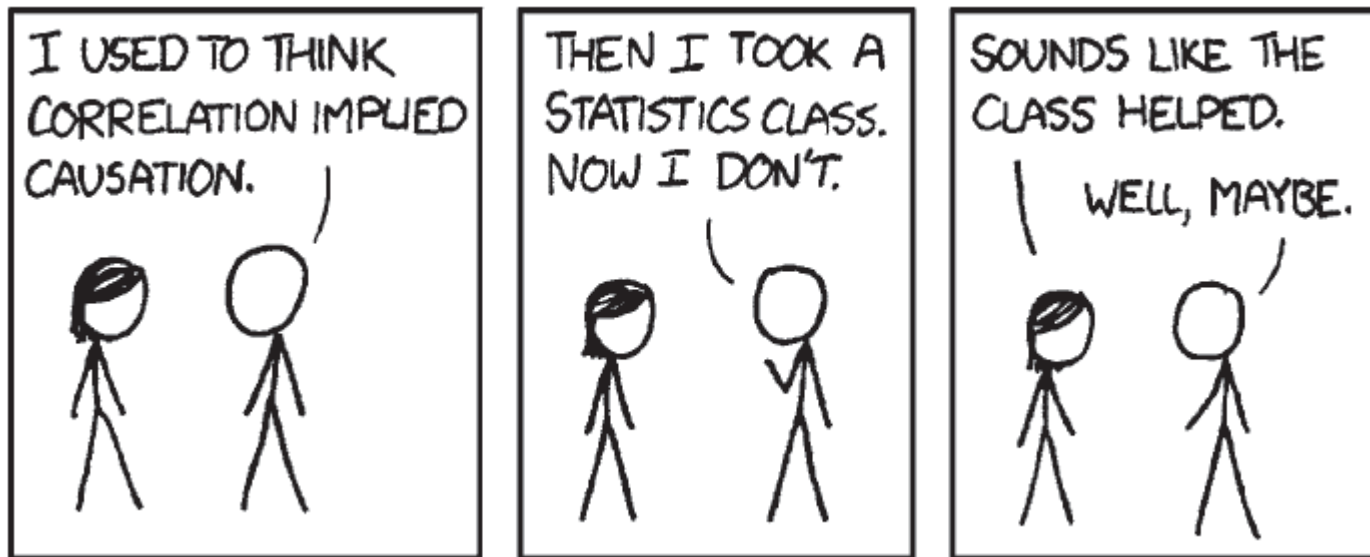
Figure A-6 Graph with an Omitted Variable



The upward-sloping curve shows that members of households with more cigarette lighters are more likely to develop cancer. Yet we should not conclude that ownership of lighters causes cancer because the graph does not take into account the number of cigarettes smoked.

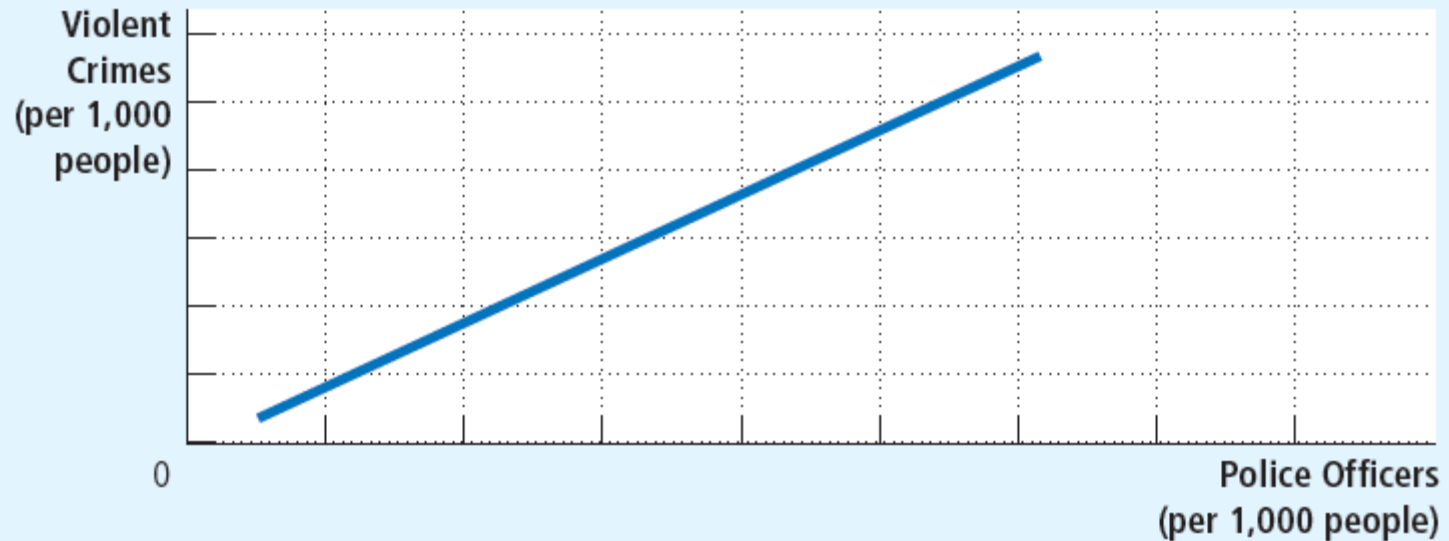
Appendix Graphing: A Brief Review

- Cause and effect
 - Reverse causality
 - Decide that event A causes event B
 - Facts: event B causes event A



Courtesy of Randall Munroe/XKCD.com

Figure A-7 Graph Suggesting Reverse Causality



The upward-sloping curve shows that cities with a higher concentration of police are more dangerous. Yet the graph does not tell us whether police cause crime or crime-plagued cities hire more police.