

ECONOMICS

Principles and Applications

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ECONOMICS: Principles and Applications, 4e
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Chapter 1



What is Economics ?

Overview

- What is economics?
 - ✓ Definition, scarcity, and choice
 - ✓ The world of economics
 - Micro vs. Macro
 - Positive vs. Normative
 - ✓ Why and how to study economics
 - ✓ The methods of economics
- Math review

Economics, Scarcity, and Choice

- Economics
 - Study of choice under conditions of scarcity
- Scarcity
 - Situation in which the amount of something available is insufficient to satisfy the desire for it

Scarcity and Individual Choice

- Unlimited variety of scarcities, based on two basic limitations:
 1. Scarce time
 - Limited number of hours in each day to satisfy our desires
 2. Scarce spending power
 - Cannot afford to buy more of the things we want

Scarcity and Individual Choice

- Limitations force each of us to make choices
- Economists study
 - Choices
 - Consequences of those choices
 - Indirect effects of individual choice on our society

Scarcity and Social Choice

- Society faces a scarcity of resources
- Categories of resources:
 - Labor
 - Capital
 - Human capital
 - Capital stock
 - Land/natural resources
 - Entrepreneurship

Scarcity and Economics

- Problems studied in economics: the scarcity of resources—and the choices it forces us to make
 - Households – have limited income to allocate among goods and services
 - Firms – production is limited by costs of production
 - Government agencies – the budget is limited, so goals must be carefully chosen

Scarcity and Economics

- Economists study the decisions made by households, firms, and governments to
 - Explain how our economic system operates
 - Forecast the future of our economy,
 - Suggest ways to make that future even better

Microeconomics

- Micro comes from the Greek word *mikros*, meaning “small”
- Studies the behavior of *individual* households, firms, and governments
 - Choices they make
 - Interaction in specific markets
- Focuses on individual parts of an economy

Macroeconomics

- Macro comes from the Greek word *makros*, meaning “large”
- Studies the behavior of the overall economy
- Focuses on big picture and ignores fine details

Positive and Normative Economics

- Positive economics: *how* the economy works
 - Can be true or false
 - Can be tested by looking at the facts
- Normative economics: *what should be*
 - Value judgments, identify problems, and prescribe solutions
 - Cannot be proved or disproved by the facts alone

Why Economists Disagree

- The difference of opinion may be positive in nature
 - Facts are being disputed
- The disagreement can be normative
 - Facts are not being disputed
- When economists have different values, they may arrive to different conclusions
- Disagreement - over goals and values

Why Study Economics

- To understand the world better
 - Global events and personal phenomena
- To achieve social change
 - Understand the origins of social problems
 - Design more effective solutions

Why Study Economics

- To help prepare for other careers
 - A wide range of careers deal with economic issues on many levels
- To become an economist
 - Develop a body of knowledge that could lead you to become an economist in the future

The Methods of Economics

- Use economic models to develop economic theories
- Economic models are built with words, diagrams, and mathematical statements
- Economic models
 - Abstract representation of reality
 - Should be as simple as possible to accomplish its purpose

Economic Models: Assumptions and Conclusions

- Two types of assumptions:
 - Simplifying assumptions
 - Essential features can stand out more clearly
 - Critical assumptions
 - Affect the conclusions of a model in important ways
 - If critical assumptions are wrong, the model will be wrong

The Three Step Process

- Economists follow the same *three-step process* to analyze almost any economic problem:
 - The first two steps explain how economists *build* an economic model
 - The last step explains how they *use* the model.

Math, Jargon, and Other Concerns...

- Economic jargon
 - Special words that allow economists to more precisely express themselves
- Math
 - High school level algebra and geometry
- We will covers some of the basic math concepts that you will need tomorrow

How to Study Economics

- Economics must be studied actively, not passively
- Active study
 - Reproduce what you have learned
 - List the steps in each logical argument
 - Retrace the cause-and-effect steps
 - Draw the graphs
 - Basic principles
 - relate to what you are learning

Math Review

- Tables and graphs
 - Tables
 - Straight-line graphs
 - Curved lines
- Linear equations
- Lines and curves shift
- Shifts vs. movements along a line

Tables and Graphs

- **TABLE A.1** Advertising and Sales at Len & Harry's

Advertising Expenditures
(\$1,000 per Month)

Sales
(\$1,000 per Month)

2

24

3

27

6

36

7

39

11

51

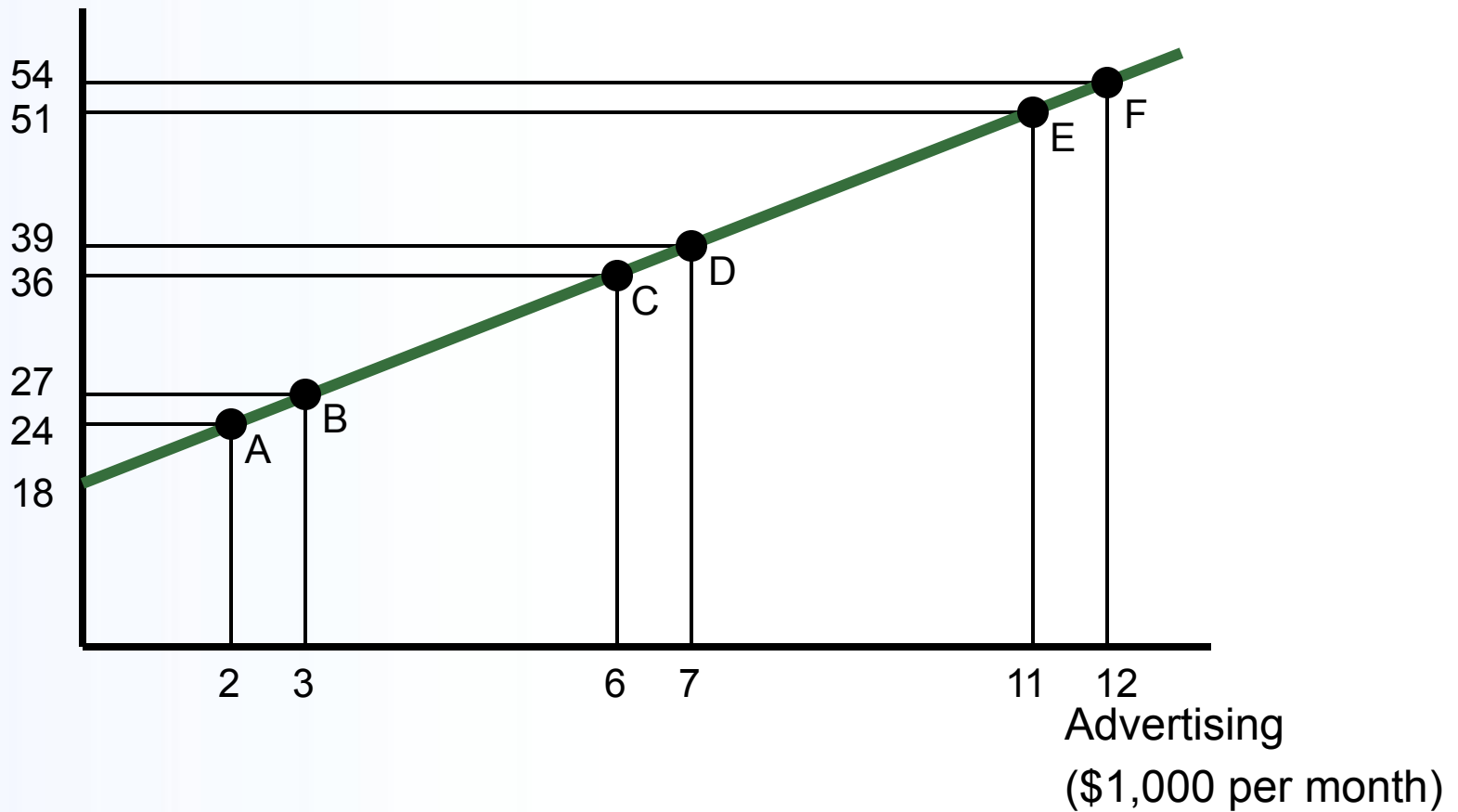
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Straight-line Graphs

- **FIGURE A.1** A Graph of Advertising and Sales

Sales (\$1,000 per month)



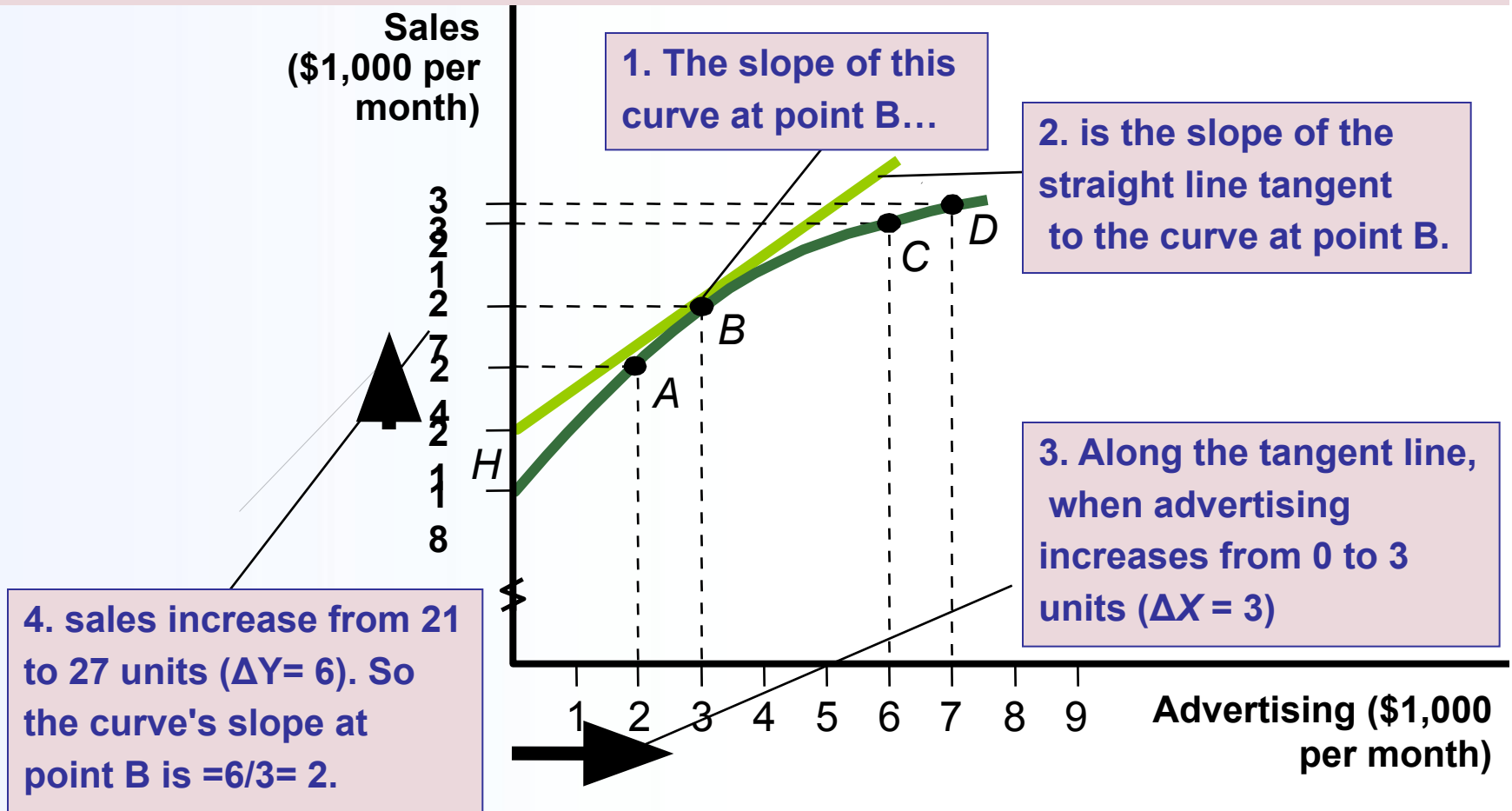
Straight-line Graphs

- Slope of a straight line =
Change in vertical variable / Change in
horizontal variable

$$= \frac{\Delta Y}{\Delta X}$$

Curved Lines

- **FIGURE A.2** Measuring the Slope of a Curve



Linear Equations

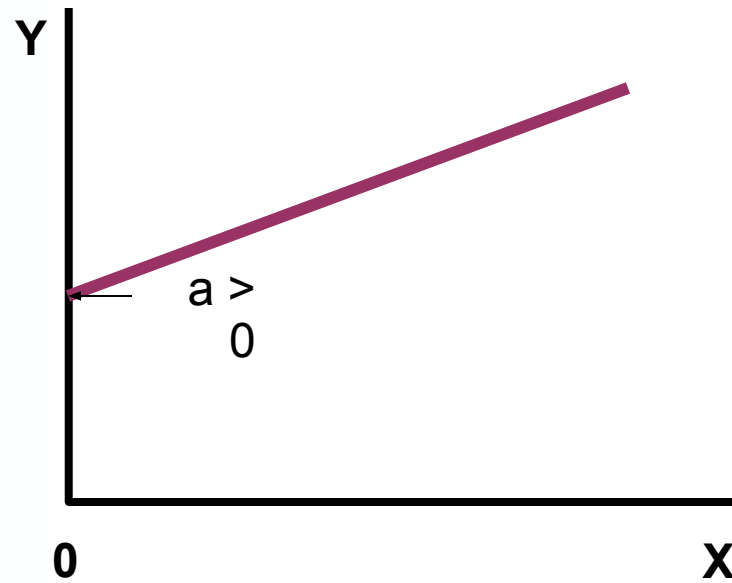
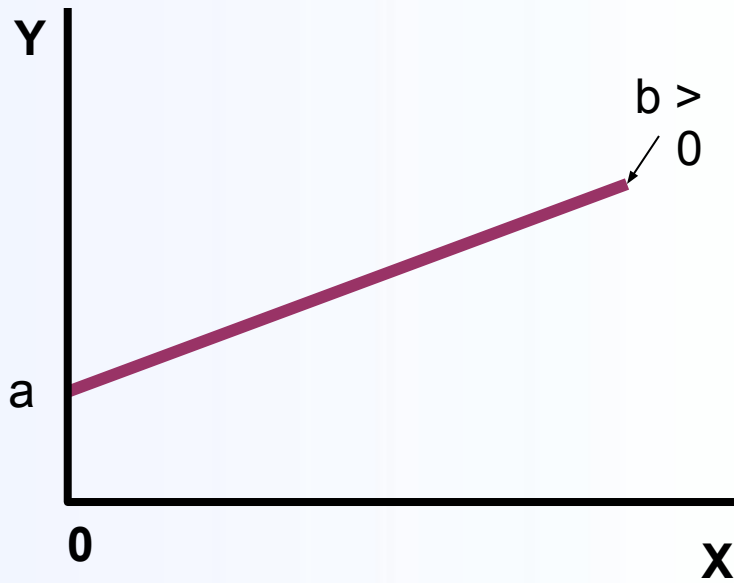
- $Y = a + bX$
- a : vertical intercept
- b : slope
- Exercise: what is the linear equation for advertisement example in Figure A.1?
- $Y = 18 + 3X$

Linear Equations

- Remember : $Y = 18 + 3X$
- For example, how much expenses are necessary to secure a sale \$39,000?
- $Y = \$39$ now
- $\$39 = 18 + 3X$
- $X = (39 - 18)/3 = 7$

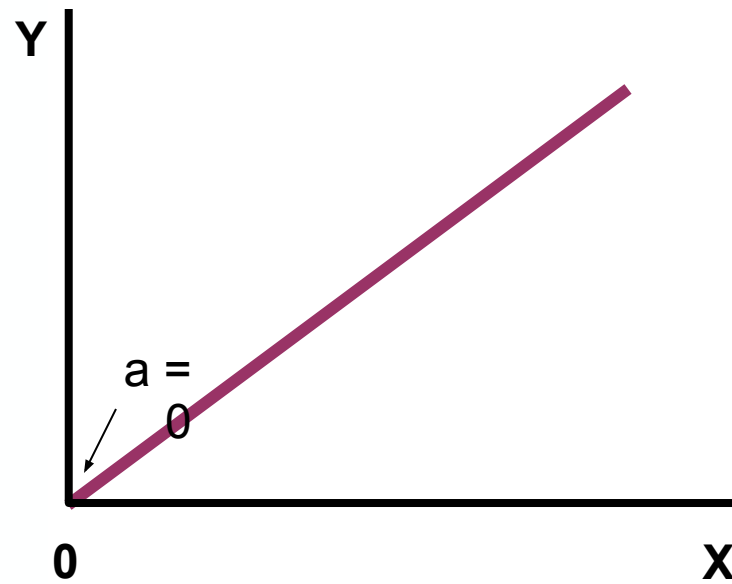
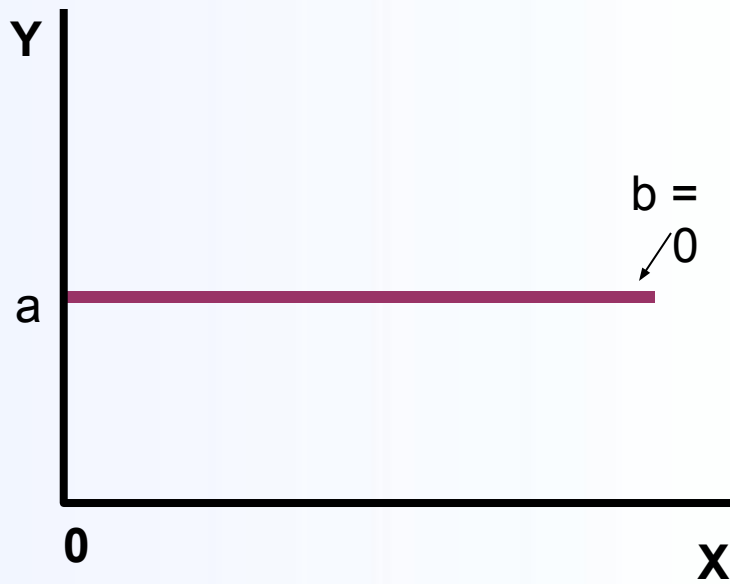
Linear Equations

FIGURE A.3 Straight Lines with Different Slopes and Vertical Intercepts



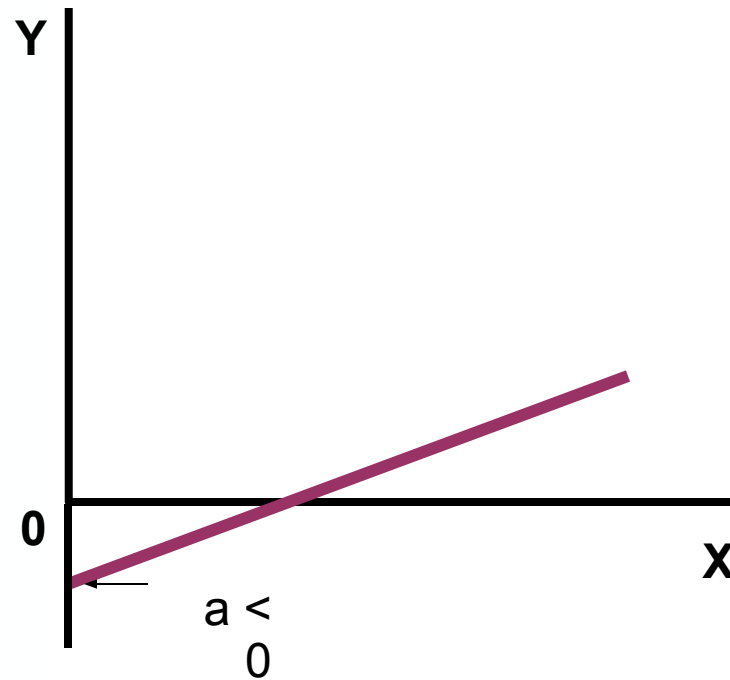
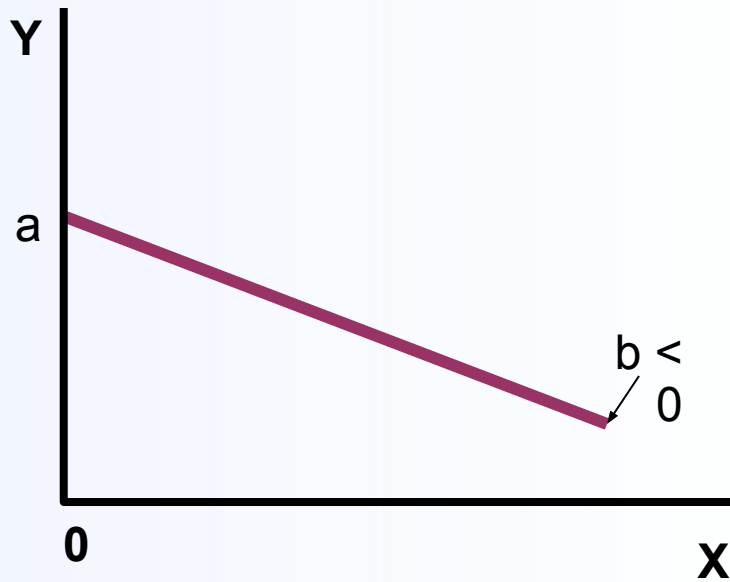
Linear Equations

FIGURE A.3 Straight Lines with Different Slopes and Vertical Intercepts



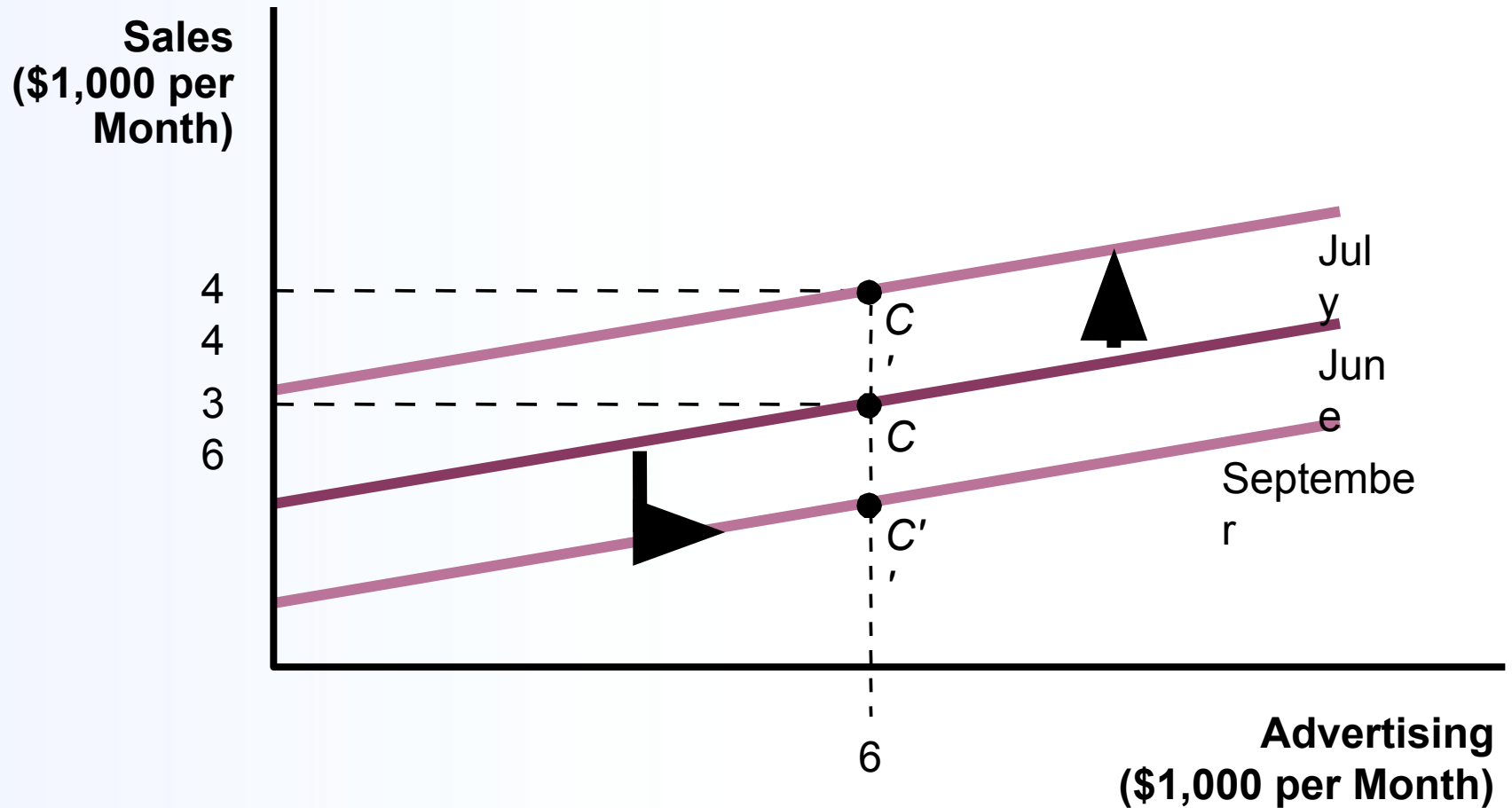
Linear Equations

FIGURE A.3 Straight Lines with Different Slopes and Vertical Intercepts



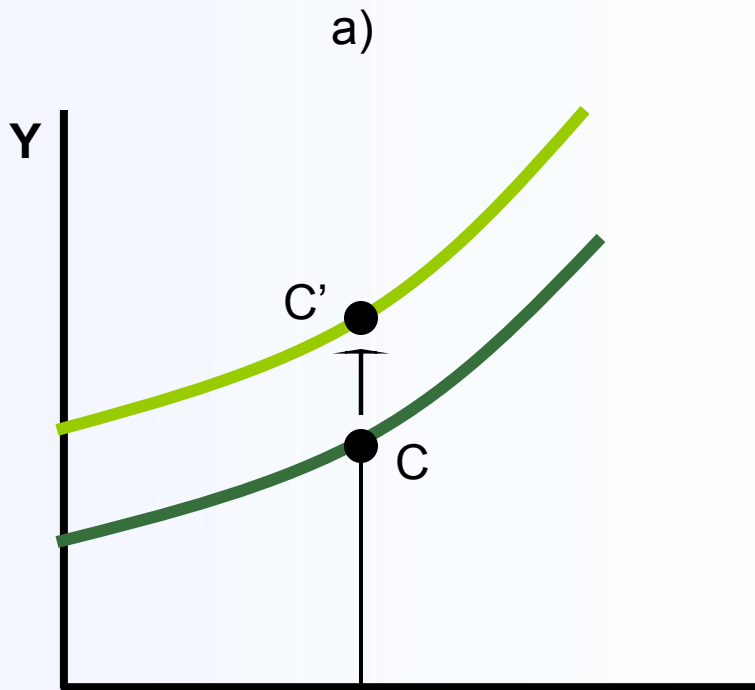
Line Shift

- **FIGURE A.4** Shifts in the Graph of Advertising and Sales

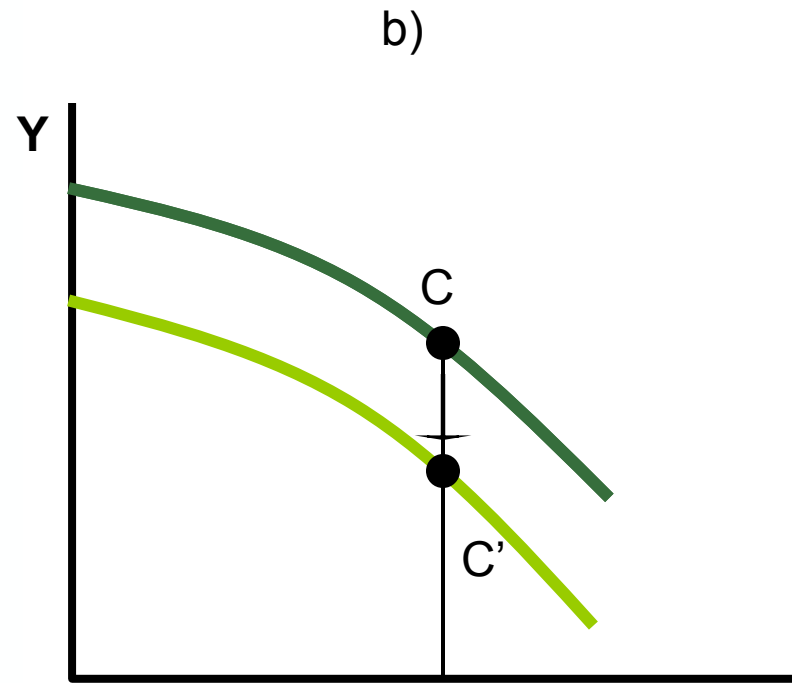


Curves Shift

- **FIGURE A.5** Shifts of Curved Lines



An increase in Z causes an increase in Y at any value of X

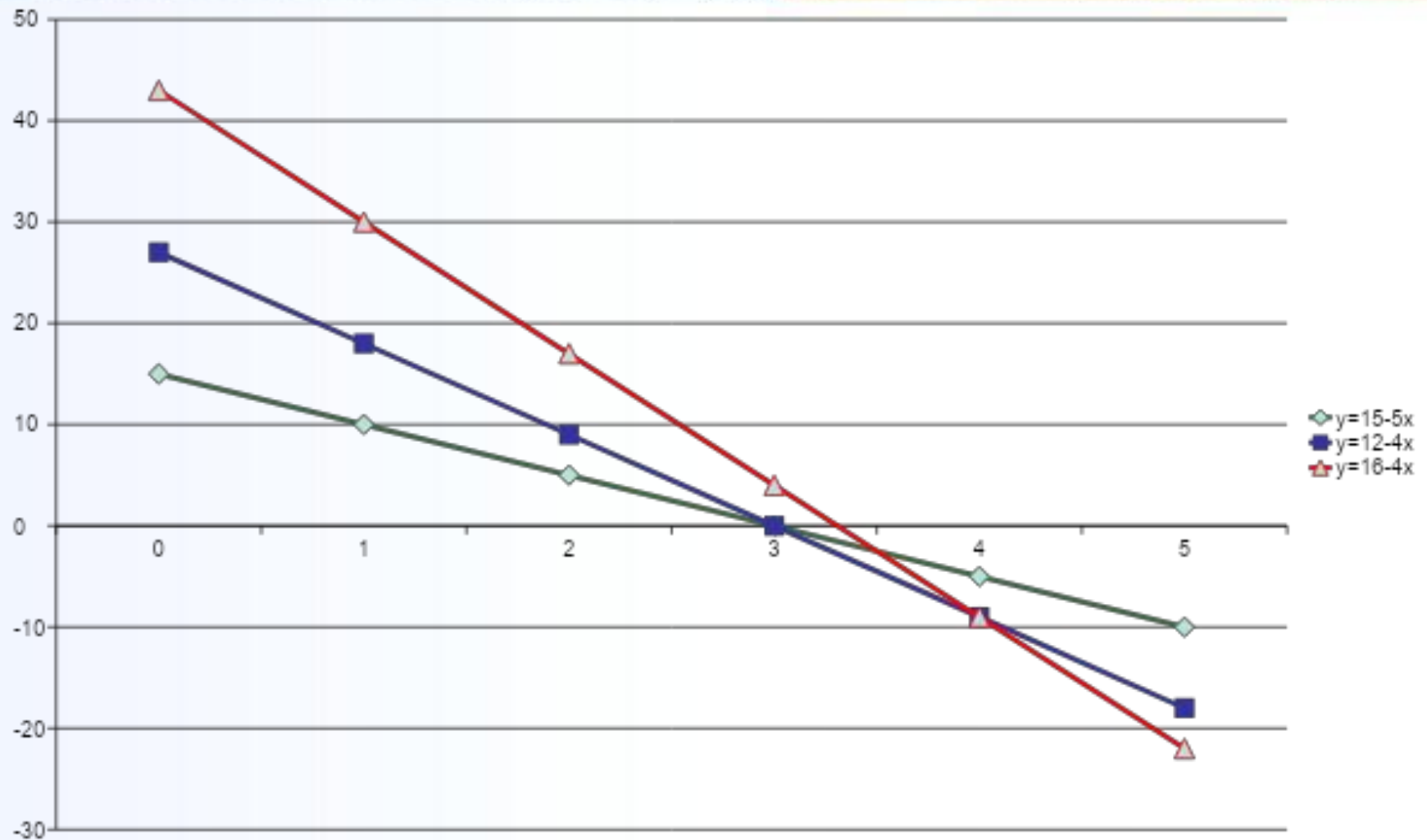


An increase in Z causes a decrease in Y at any value of X

Shifts vs. Movements Along a Line

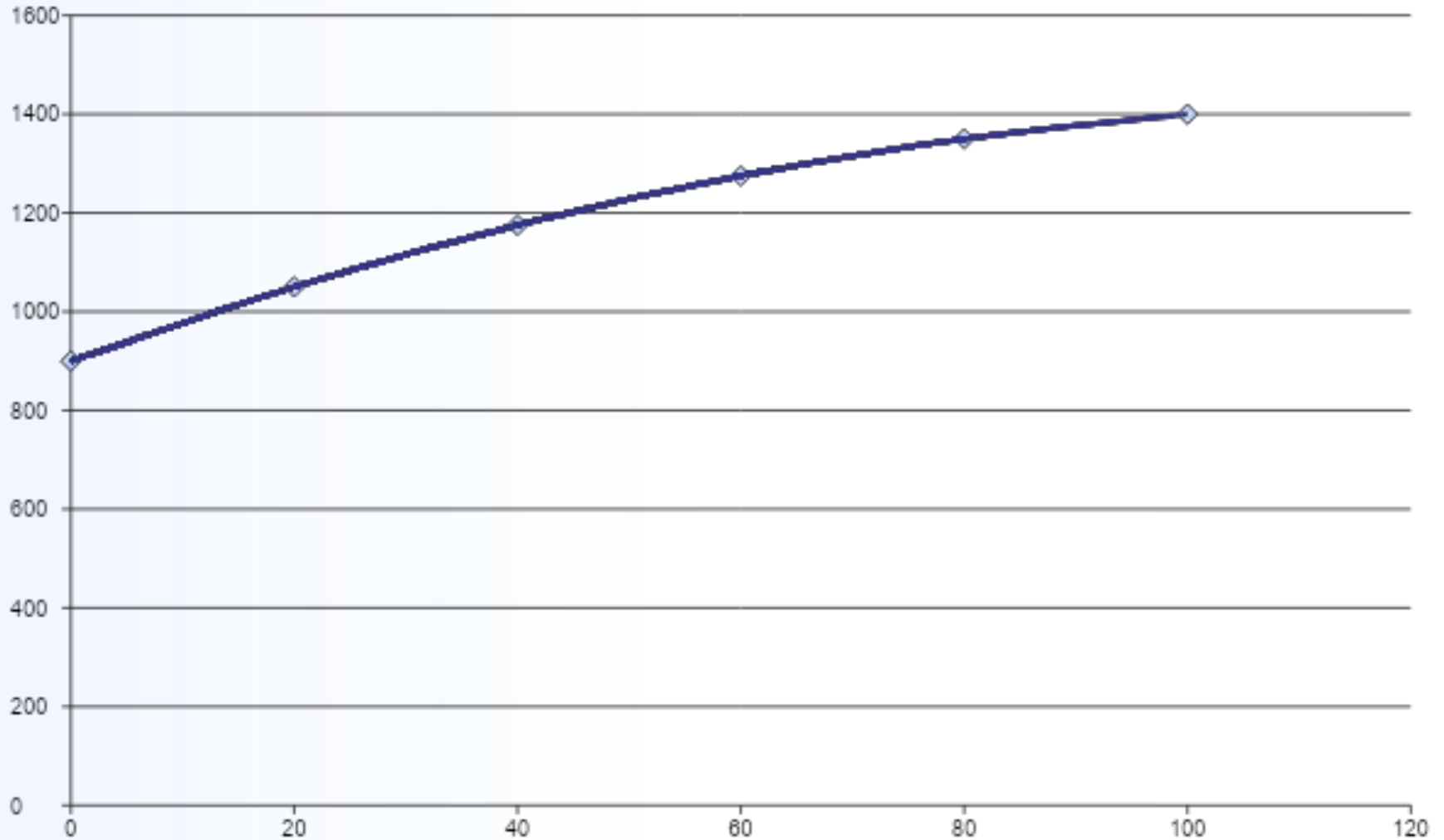
- Suppose Y is the dependent variable, which is measured on one of the axis. If the independent variable *measured on the other axis changes*, we move along the line.
- But if *any other* independent variable changes, the *entire line shifts*.

Practice Question 1



Practice Question 2

SAT on Hours



Practice Question 3

