

T E N T H   E D I T I O N

# Economic Concepts

A Programmed Approach

ROBERT C. BINGHAM  
WILLIAM HENRY POPE



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A Programmed Approach

**ROBERT C. BINGHAM**

Late Professor of Economics  
Kent State University

Revised by

**WILLIAM HENRY POPE**

Formerly of Ryerson Polytechnical Institute

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ECONOMIC CONCEPTS: A Programmed Approach

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# **ECONOMIC CONCEPTS**

## **A PROGRAMMED APPROACH**

# PREFACE

Though this tenth edition has been revised specifically for use with McConnell-Brue's *Economics*, twelfth edition, it can be used along with any current mainstream principles of economics textbook.

And, indeed, it *should* be used by all those who have heard that economics is a tough subject and are worried about getting through the course.

What you have to do is take it one step at a time. This programmed book does precisely that. In so doing, it leads you easily through all the cause-and-effect relationships that you will meet in any principles of economics textbook.

This edition has been extensively revised to take account of the recent switch from national income accounting based on the gross national product (GNP) to that based on the gross domestic product (GDP). The major revisions have occurred in Sections 4, 5, and 6.

Section 12 has been revised to stress the least-cost rule and the profit-maximizing rule in combining resources. The added emphasis has been achieved through the deletion of thirteen frames and the addition of six.

In Section 13, five frames have been added to show more clearly terms-of-trade advantageous to both countries when production and trade occur on the basis of comparative advantage. Also in Section 13, the last ten pages have again been updated to match the similar updating to the 1990 United States balance of payments figures of McConnell-Brue's twelfth edition. With the nation's net international indebtedness continuing to set new records and with the resulting trade deficit continuing in the close to \$100 billion annual range, it is important that the cause and effect relationship be examined carefully using the actual real world figures.

William Henry Pope

# HOW TO USE A PROGRAMMED BOOK TO LEARN BASIC ECONOMICS

A programmed book is neither textbook nor workbook. Instead, it is a new way to learn. This new way of learning is based on the question-and-answer method Socrates used 2,400 years ago to teach his students.

**What a programmed book is:** A programmed book is made up of *frames*. There are several frames on each page of the book. Altogether there are 1,998 in this programmed book. If you thumb through the book you will see these frames. Here is an example of a frame.

## 1-1

The *lower* the price flour millers have to pay for wheat the *more* wheat they buy from farmers. On the other hand, when the price of wheat *rises* millers (increase/decrease) the amount of wheat they purchase from farmers.

This frame and every other frame has a small amount of new information in it. Each frame also contains one or more questions. The frame has enough information in it to enable you to respond to the questions correctly by applying things you already know or have learned in previous frames.

People also seem to learn things best when they learn them a little bit at a time—when they learn them in small steps. Each frame is a small step. Even though each step is small, by taking a number of small steps people can learn things which are both complex and difficult.

People also seem to learn best when they take an active part in learning—when they answer questions at every step of the way. The questions in a programmed book are not all alike. Some ask you—as in the question in the frame above—to make a choice; some require you to fill in one or two words or numbers; and a few frames call for you to write in a phrase or even a complete sentence.

Each frame or step includes the response to the question asked. As soon as you have responded to the question, you can find out whether your response was correct or not. Each step is small and is written in such a way that you will almost always come up with the correct response. The frames are arranged in such a way that you learn new things by building on what you have already learned: you progress from simple and familiar to difficult and unfamiliar ideas and ways of doing things.

Using a programmed book is a lot like having your own personal tutor! It teaches by telling and by asking and by correcting you when you are wrong and letting you know when you are right. A tutor seldom lectures you. He or she talks to you, giving you one small piece of information or one simple idea at a time. Your tutor makes you take part in the learning process by questioning you and frames the questions so you *know* the correct response. Your tutor doesn't give the response away by the way the questions are asked. He or she makes you think for yourself, and doesn't ask you to be a parrot. With a tutor you can learn at your own speed. When you have trouble with an idea or bit of information, you can slow down. And when the subject matter is easy you can speed up. Most people learn more from a tutor than they can learn from a lecture or from reading a book.

**How to use a programmed book:** Anyone can learn something from a programmed book, but to learn the most you have to use the programmed book in the right way. Here is how to use this book to get the most out of it.

1. In addition to the programmed book, you need two things:
  - a. A pen or pencil. A pencil is better.
  - b. A small card or sheet of paper (about 2 × 8 inches) to cover the correct response while you are deciding on your answer to the question.
2. There are several different kinds of questions. The three most common kinds are:
  - a. *Choice questions* in which the possible responses are underlined in parenthesis and have a slash (/) between them. For example:  
Most human beings have (two/four/twelve) legs.
  - b. *Fill-in questions* in which there are one or more blanks. One word or number is to be written in each blank. For example:  
A typical human being has \_\_\_\_\_ head and walks on his or her own \_\_\_\_\_.
  - c. *Completion questions* in which there is a blank which begins with an asterisk (\*) and is from one-half to several lines long. These questions are to be answered in your own words. The number of words you use is up to you. The blank is long enough for you to write your response on it. For example:  
Define a normal human being.\* \_\_\_\_\_

---

There are several other kinds of questions which you find every so often. What you have to do to answer these questions will be fairly obvious or will be indicated in the frame.

3. The correct responses for a frame are on the left side of the page. Keep them covered until you have answered all of the questions in each frame. Answer each question by actually writing out the response or circling your response to the question. Don't just think your answer. Commit yourself in writing!

4. Only after you have responded to the question in writing should you look to see what the correct response is. Don't look ahead. You won't

learn very much when you peek because you are substituting memorizing for thinking.

5. There are often equally good ways of giving a correct answer. The printed response for any frame is usually just one way to express the correct response. You will have to judge for yourself whether your response and the printed response mean the same thing.

6. Start with the first frame in each section of the book and work through to the last frame. Do not skip frames!

7. When you make a mistake:

- a. First, look back at the question. Perhaps you just misread the question or made a "silly" mistake and you can see why you are wrong.
- b. If you didn't misread the question or make a silly mistake, go back several frames and review them. This review will usually tell you why you made the mistake and show you how to get the correct response.

8. Do not use the programmed book for too long a period at any one time. An hour is probably the longest you should use the program without a break. If you find yourself making one mistake after another, quit for a while. When you start again, begin with the first frame following the last *Review Frame* you did. When you stop, try to stop at a *Review Frame*.

9. Work at your own speed. Don't try to go too fast. If you are making a lot of mistakes, you are either going too fast or have been studying for too long a time. Either go more slowly or stop for a while.

10. At the end of the book there are *Review Tests* for each section. At the end of each section, you will be directed to take a review test. Depending upon how well you do on the review test, you may want to repeat some or all of the frames in that section.

If you have used a programmed book before, you already know how easily, how much, and how rapidly you can learn from it. If you have never used the programmed approach before, you will be pleasantly surprised by how little time and effort it requires and how much and how well you can learn.

There is a lot more in your first course in economics than is included in this programmed book. *Economic Concepts: A Programmed Approach* covers only those parts of economics which are the most important and the most difficult for beginning students to learn. If you are also using a regular economics textbook, this programmed book will enable you to master the fundamentals and will get you over the really tough spots in your textbook. You can learn the easier material in your textbook without a program. You can learn the more difficult and advanced material by yourself after you have mastered the basic economics in this programmed book.



# **ECONOMIC CONCEPTS**

## **A PROGRAMMED APPROACH**

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# Graphs and Their Meaning

## section 1

As was said in the Preface, this programmed book “*should* be used by all those who have heard that economics is a tough subject and are worried about getting through the course.

“What you have to do is take it one step at a time. This programmed book does precisely that. In so doing, it leads you easily through all the cause-and-effect relationships that you will meet in any principles of economics textbook.”

Since these relationships are always shown in diagrams—in graphs—that’s where we start.

When you wish to go somewhere new, you will probably need directions. If it’s not much more than around the corner, then something along these lines would probably get you there: “Go straight along this street until you get to the third traffic light, then go left two blocks, and that’s where the arena is, just across the street from the bank.” However, if it’s in the next state, you would probably like to be given a map. And that’s all a graph is: a map that reveals economic relationships more clearly than can be done in words or in a table. So, let’s start.

### 1-1

Look at the space below.



point (dot, speck)

What do you see in this space? A \_\_\_\_\_.

### 1-2

No—not unless you have  
some other point in the  
space with which you can  
compare it

Can you explain precisely where this point is located? Yes/No

### 1-3

Suppose we add another point in the space and label it 0 (zero) and label the first point A. The space now looks like this.

A  
•

•  
0

right  
above

You can see that point A is to the (right/left) of point 0. Point A is also (above/below) point 0.

**1-4**

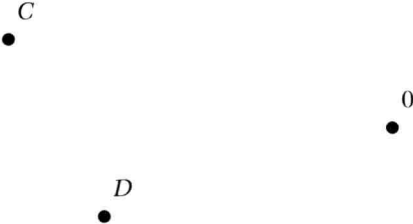
Look at point *B* in the space below.



right, below      Point *B* is to the \_\_\_\_\_ of point 0 and also \_\_\_\_\_ it.

**1-5**

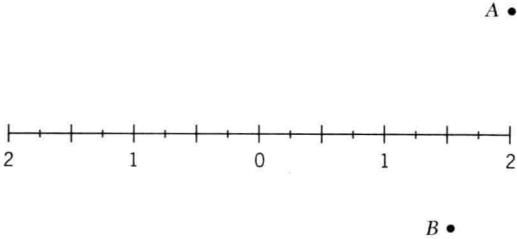
Now look at point *C* and point *D* in the space below.



left      Both point *C* and point *D* are to the \_\_\_\_\_ of point 0. But  
above, below      point *C* is \_\_\_\_\_ and point *D* is \_\_\_\_\_ point 0.

**1-6**

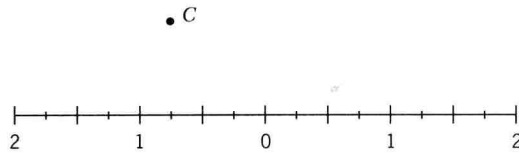
Let's draw a horizontal line through point 0 and divide this horizontal line into inches. (We haven't really divided this line into inches. To save space the distance between zero and one and between one and two is actually less than an inch. We'll pretend in this section, however, that these distances are an inch.)



2      Point *A* is located \_\_\_\_\_ inches to the right of point 0.  
 $1\frac{1}{2}$       Point *B* is \_\_\_\_\_ inches to the right of 0.

**1-7**

In the space below,

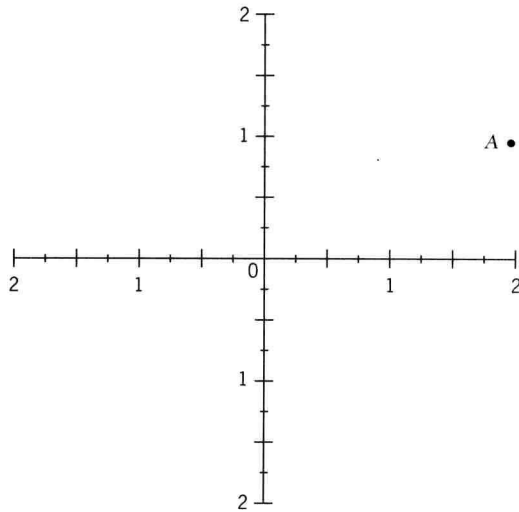


• *D*

$\frac{3}{4}$  point *C* is \_\_\_\_\_ of an inch to the left of 0; and point *D* is  
1 \_\_\_\_\_ inch to the left of 0.

**1-8**

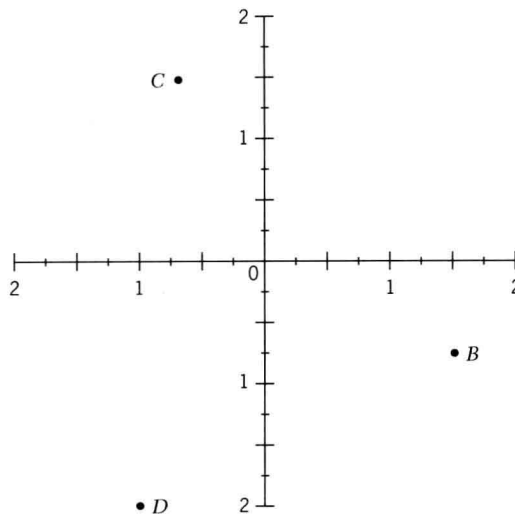
Let's draw a vertical line through point 0 and divide this vertical line into inches. (Again we are pretending that the line is divided into inches.)



Not only is point *A* 2 inches to the right of point 0, but it is also  
1 \_\_\_\_\_ inch above 0.

**1-9**

And in the space that follows:



$\frac{3}{4}$  Point  $B$  is \_\_\_\_\_ of an inch below 0.

$1\frac{1}{2}$  Point  $C$  is \_\_\_\_\_ inches above 0.

2 Point  $D$  is \_\_\_\_\_ inches below 0.

### 1-10

The location of any point, in short, can be described by measuring the distance it lies

right, left (either order)

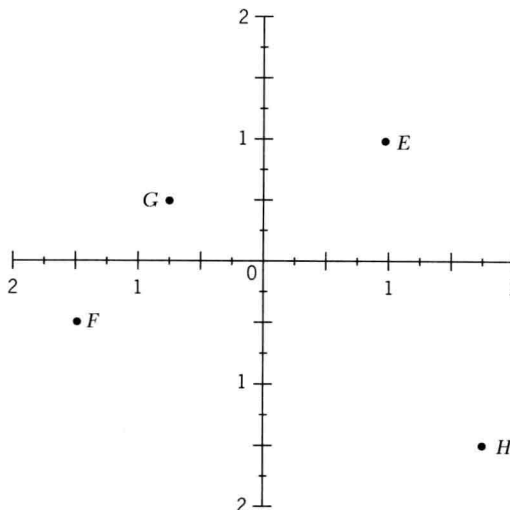
to the \_\_\_\_\_ or \_\_\_\_\_ of point 0

above, below (either order)

and \_\_\_\_\_ or \_\_\_\_\_ point 0.

### 1-11

In geometry the point where the horizontal and vertical lines cross, instead of being called point 0, is called the **origin**. Point  $E$  in the space below



1, right, 1,  
above

is located \_\_\_\_\_ inch to the \_\_\_\_\_ ; and \_\_\_\_\_  
inch \_\_\_\_\_ the origin.

### 1-12

origin  
origin

Looking back at the diagram in frame **1-11**, we can see that point *F* is  
located  $1\frac{1}{2}$  inches to the left of the \_\_\_\_\_ and  $\frac{1}{2}$  of an inch below  
the \_\_\_\_\_.

### 1-13

How would you describe the location in frame **1-11** of the following  
points?

$\frac{3}{4}$  of an inch to the left  
and  $\frac{1}{2}$  inch above the  
origin

Point *G*: ° \_\_\_\_\_  
\_\_\_\_\_.

$1\frac{3}{4}$  inches to the right and  
 $1\frac{1}{2}$  inches below the  
origin

Point *H*: ° \_\_\_\_\_  
\_\_\_\_\_.

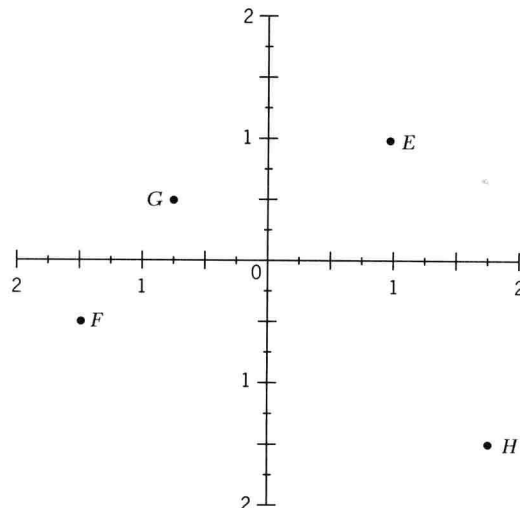
### 1-14

Just as we call point 0 the origin, we call the horizontal line in our dia-  
grams the horizontal **axis**. The vertical line, similarly, is called the vertical

axis

### 1-15

And instead of talking about the distance to the right or left of the origin,  
we can call distances to the *right* of the origin *plus* (+) or positive dis-  
tances; and distances to the *left* of the origin *minus* (−) or negative  
distances. Thus in the diagram below,





plus  
minus

point  $E$  is a (plus/minus) 1 inch along the horizontal axis from the origin; and point  $F$  is a (plus/minus)  $1\frac{1}{2}$  inches along the horizontal axis from the origin.

**1-16**

minus  
horizontal, plus

And in the diagram in frame **1-15**, point  $G$  is a \_\_\_\_\_  $\frac{3}{4}$  of an inch along the \_\_\_\_\_ axis; and point  $H$  is a \_\_\_\_\_  $1\frac{3}{4}$  inches along the same axis from the origin.

**1-17**

Similarly, we call the distance *above* the origin a *plus* (+) or positive distance; and the distance *below* the origin a *minus* or negative (−) distance. Looking only at the distances along the vertical axis from the origin in the diagram in frame **1-15**:

+

−

+

−

Point  $E$  is a (+/−) 1 inch from the origin.

Point  $F$  is a (+/−)  $\frac{1}{2}$  inch from the origin.

Point  $G$  is a (+/−)  $\frac{1}{2}$  inch from the origin.

Point  $H$  is a (+/−)  $1\frac{1}{2}$  inches from the origin.

**1-18**

two

Every point in a diagram, therefore, has (one/two/three) dimensions.

**1-19**

horizontal  
vertical

The first dimension of any point is its plus or minus distance from the origin along the \_\_\_\_\_ axis. The second dimension is its plus or minus distance from the origin along the \_\_\_\_\_ axis. (Mathematicians call the horizontal axis the *abscissa* and the vertical axis the *ordinate*; but you don't need to remember this. We'll continue to call them the horizontal and vertical axes.)

**1-20**

If a point lies

− (minus or negative)

+

+

− (minus or negative)

to the left of the origin it is a \_\_\_\_\_ distance from the origin.

to the right of the origin it is a \_\_\_\_\_ distance from the origin.

above the origin it is a \_\_\_\_\_ distance from the origin.

below the origin it is a \_\_\_\_\_ distance from the origin.