

The simplicity of APL programming  
and the power of the IBM 5100 Portable Computer







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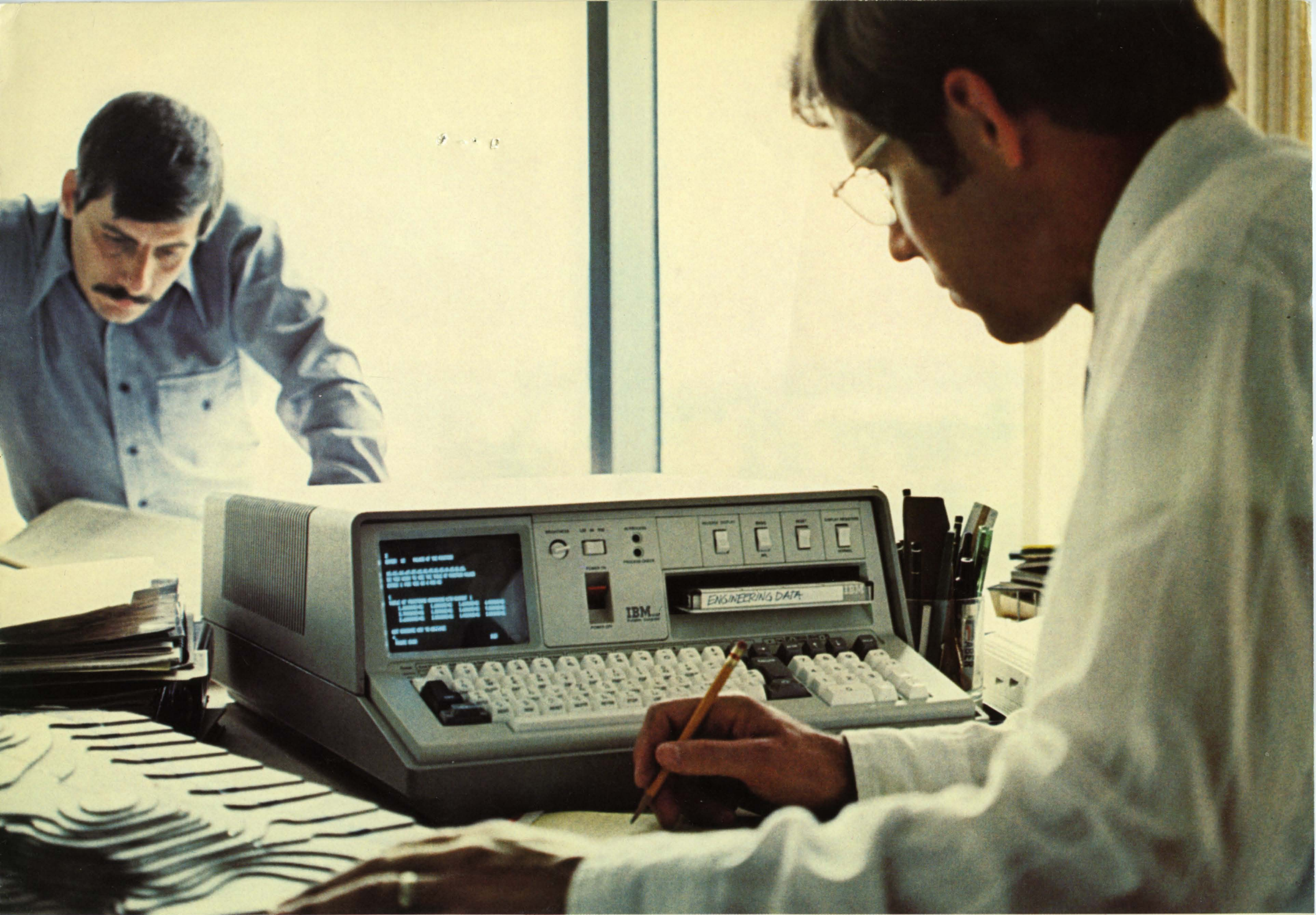
IBM World Trade Corporation  
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(International)



**Computer-aided instruction available.** Optionally available with the IBM 5100 Portable Computer is a computer-aided instruction course for APL. Like self-study instruction, it offers you the convenience of studying at your own location, at your own pace and on your own IBM 5100. The purpose of this course is to enable you to use the APL language and the IBM 5100 as problem-solving tools.

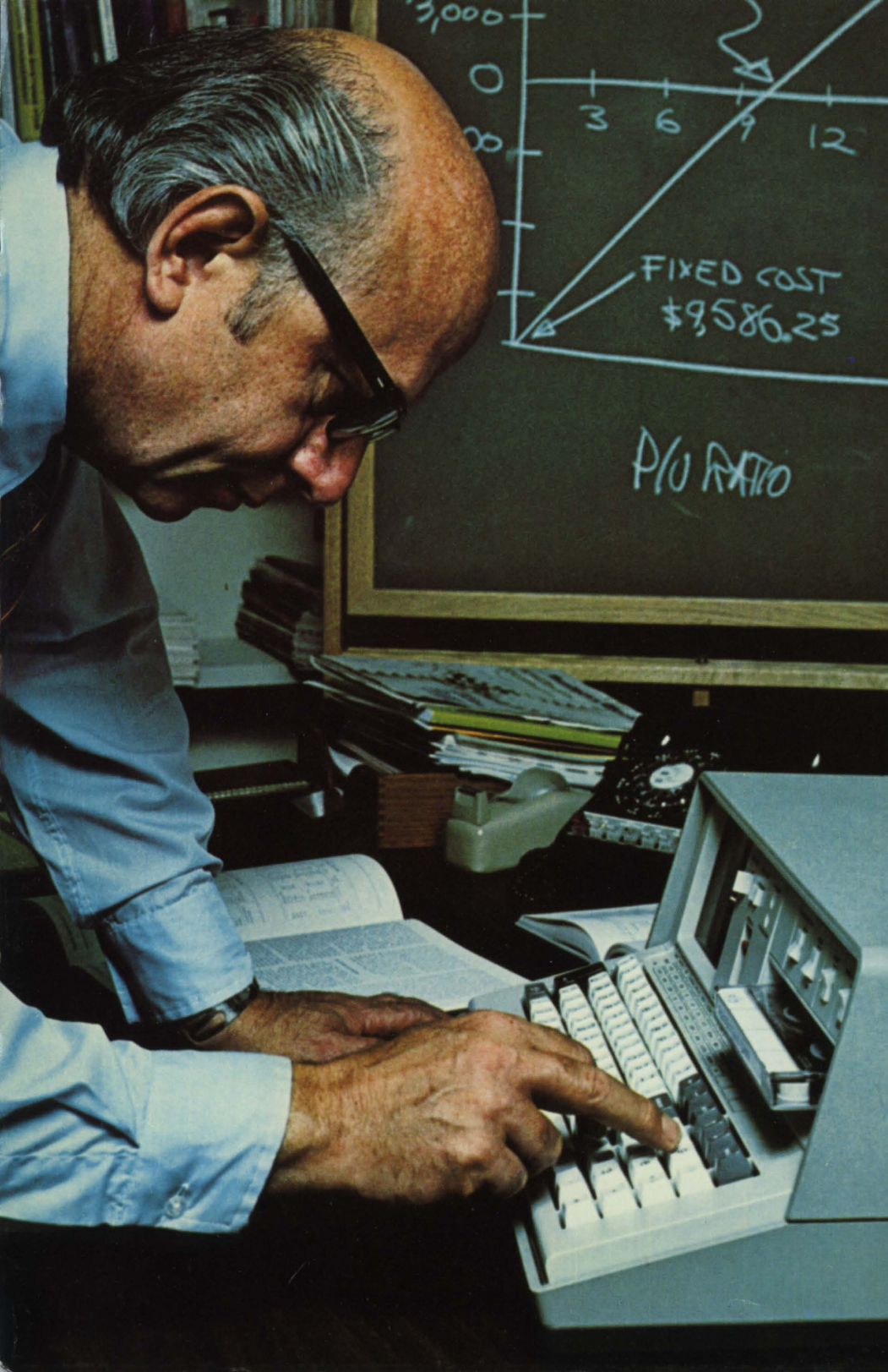
**Problem-Solver Libraries available.** IBM 5100 Problem-Solver Libraries are compendiums of widely used mathematical routines and techniques. They are designed to assist you and your organization with your everyday problem solving. The interactive routines contained within a particular library will, via prompting messages, lead you to the solution offered in a step-by-step manner. Optionally available for the IBM 5100 in the APL language are the Statistical Problem Solver Library of 40 routines, and the Mathematical Problem Solver Library of 37 routines.





IBM 5100 Portable Computer for on-site problem solving







# Put full-function computer power wherever your problem solvers are

Solutions to business, engineering and scientific problems can be difficult, elusive targets. Now you can have a sophisticated portable computer that can help your people zero in on information...put it together faster...and explore more options at critical points.

Because the IBM 5100 Portable Computer is about the size and weight of an office typewriter, you can put it wherever needed. Offering the high-level functions of a fixed-base computer, the IBM 5100 can be easily moved from desktop to lab...conference room...client's office...job site...wherever there's a grounded 115V outlet.

By giving your problem solvers increased freedom to focus on creative solutions, this portable computer can make them more effective and more productive.

Just plug in the IBM 5100 and it's ready for work. Preprogrammed libraries of



Built-in TV adapter allows the 5100's data to be shown on black-and-white monitors for meetings or presentations.

mathematical, statistical, and business analysis programs frequently needed in many professional fields are optionally available. These are programs you don't have to spend time and money to develop.

You'll find the IBM 5100 Portable Computer a flexible new tool that can be highly productive. Chances are you'll find it an economically attractive investment, too.





The IBM 5100 Portable Computer for business and financial problem solvers



# A computer that's yours instead of everybody's: The IBM 5100

You can now have a sophisticated stored-program computer that's truly portable...and at a cost low enough that it can serve as your personal computer.

The IBM 5100...about the size and weight of an office typewriter...yet it is a full function, high-level computer.

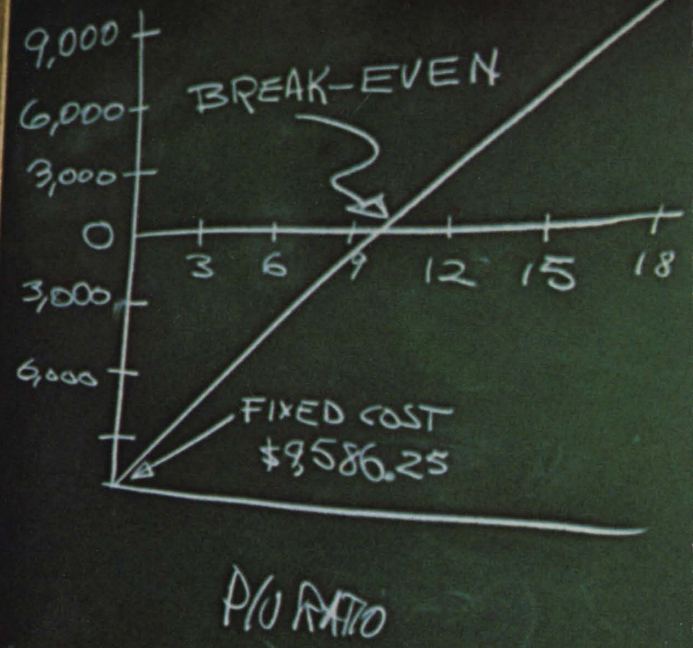
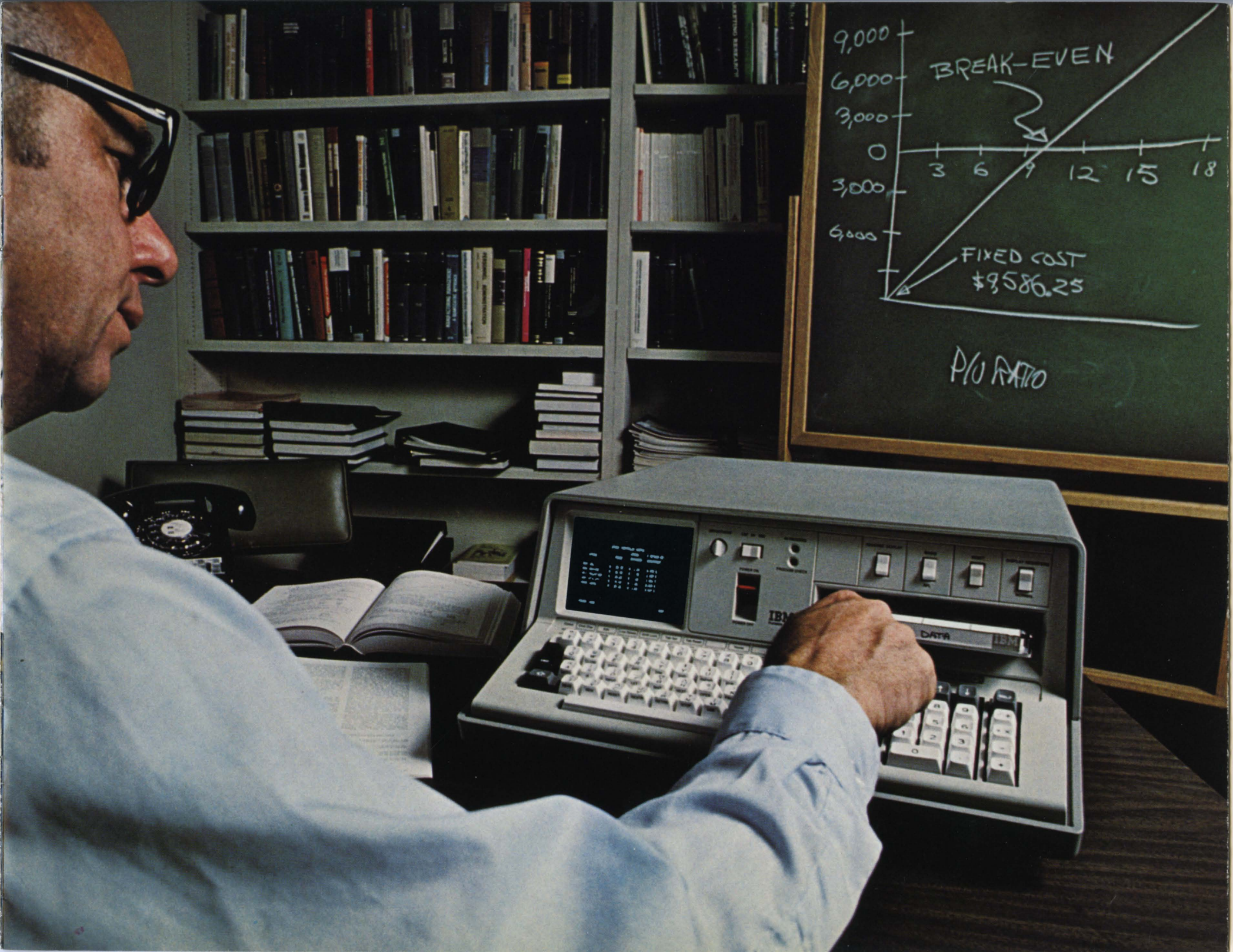
## **A problem solving tool to help you**

Engineered specifically for problem-solving professionals, and using advanced technology to permit portability without sacrificing function, the IBM 5100 Portable Computer offers you:

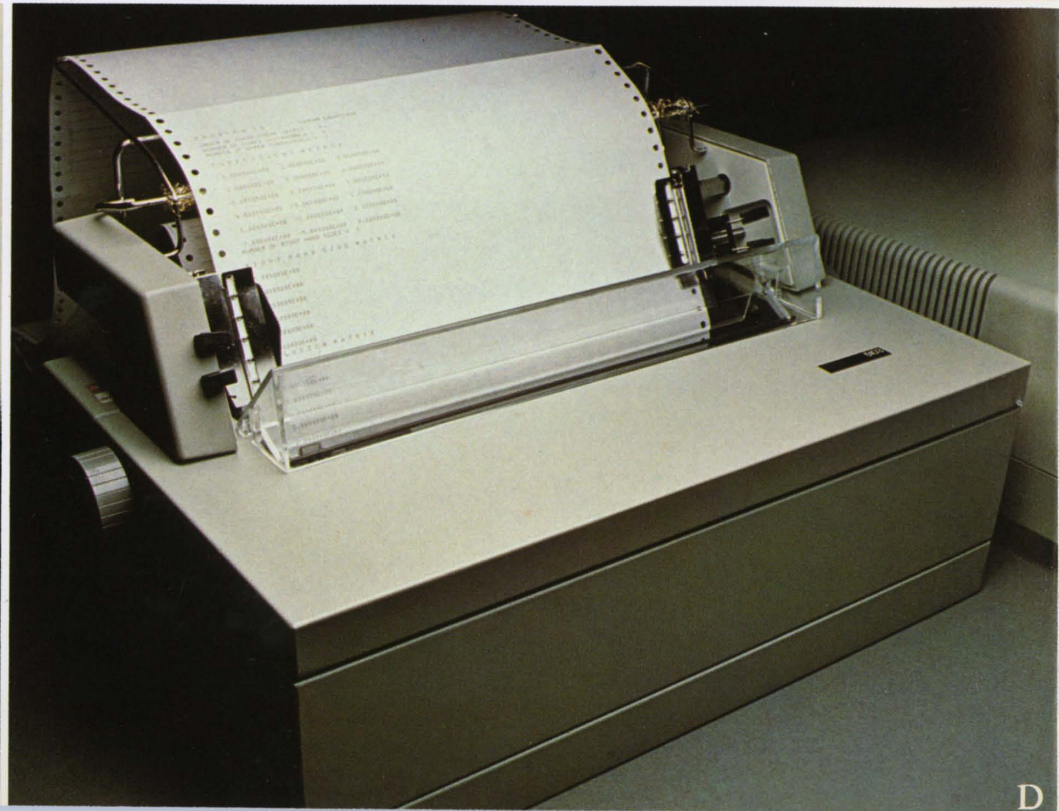
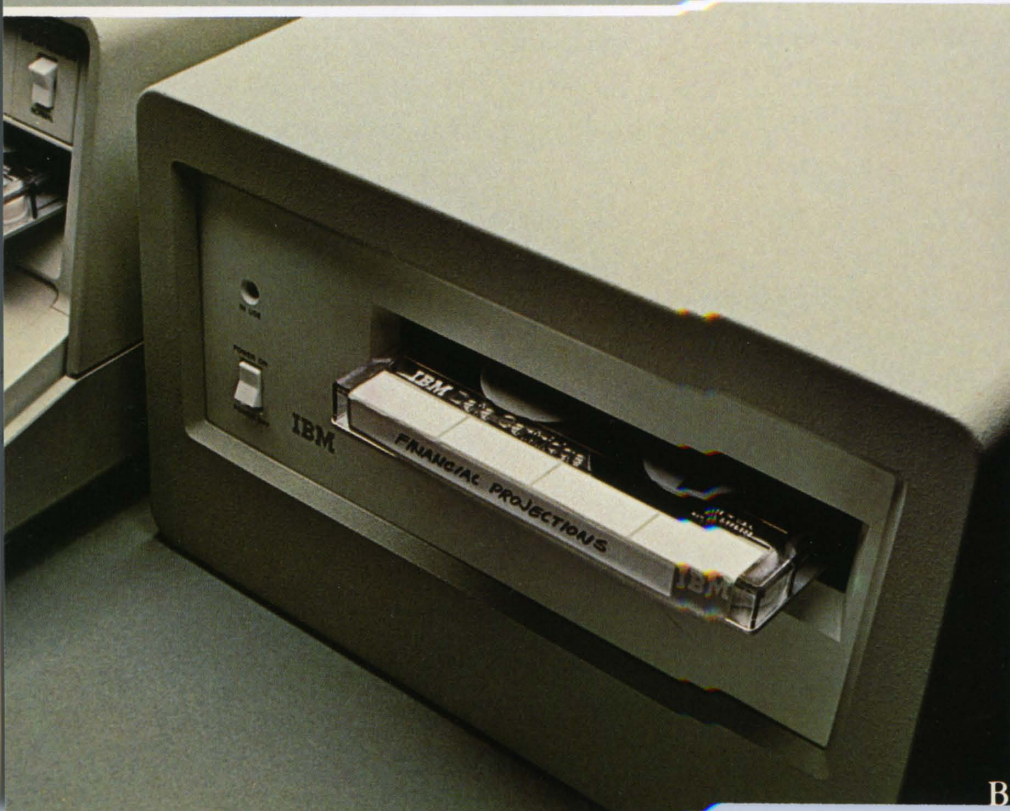
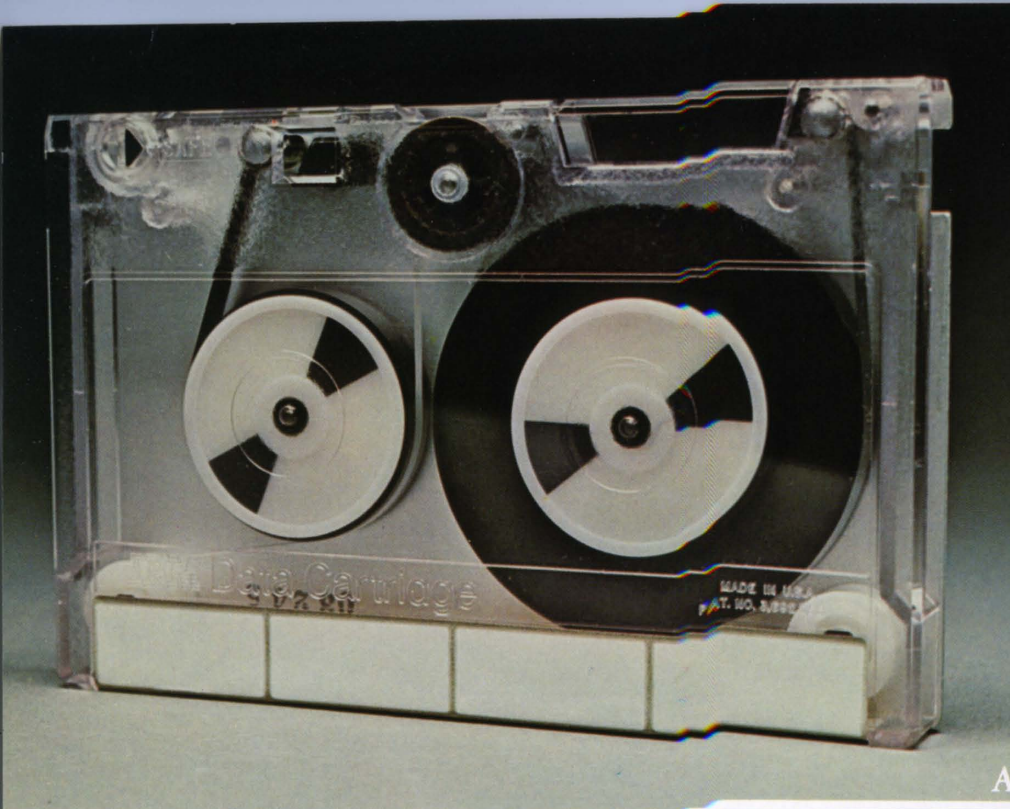
- Compact MOSFET technology: 16,384 to 65,536 positions of storage permit use of sophisticated mathematical techniques

- APL and/or BASIC interactive programming languages
  - A full-function keyboard designed for ease of use
  - Large-capacity magnetic tape storage using removable Data Cartridges
  - Visual display of up to 1024 characters in 16 lines
  - Telecommunications capability
  - Eighty character-per-second bidirectional printer
  - Auxiliary tape unit
- ...all to help provide a personal, problem-solving resource that can help you make more effective and creative use of your time and professional skills.







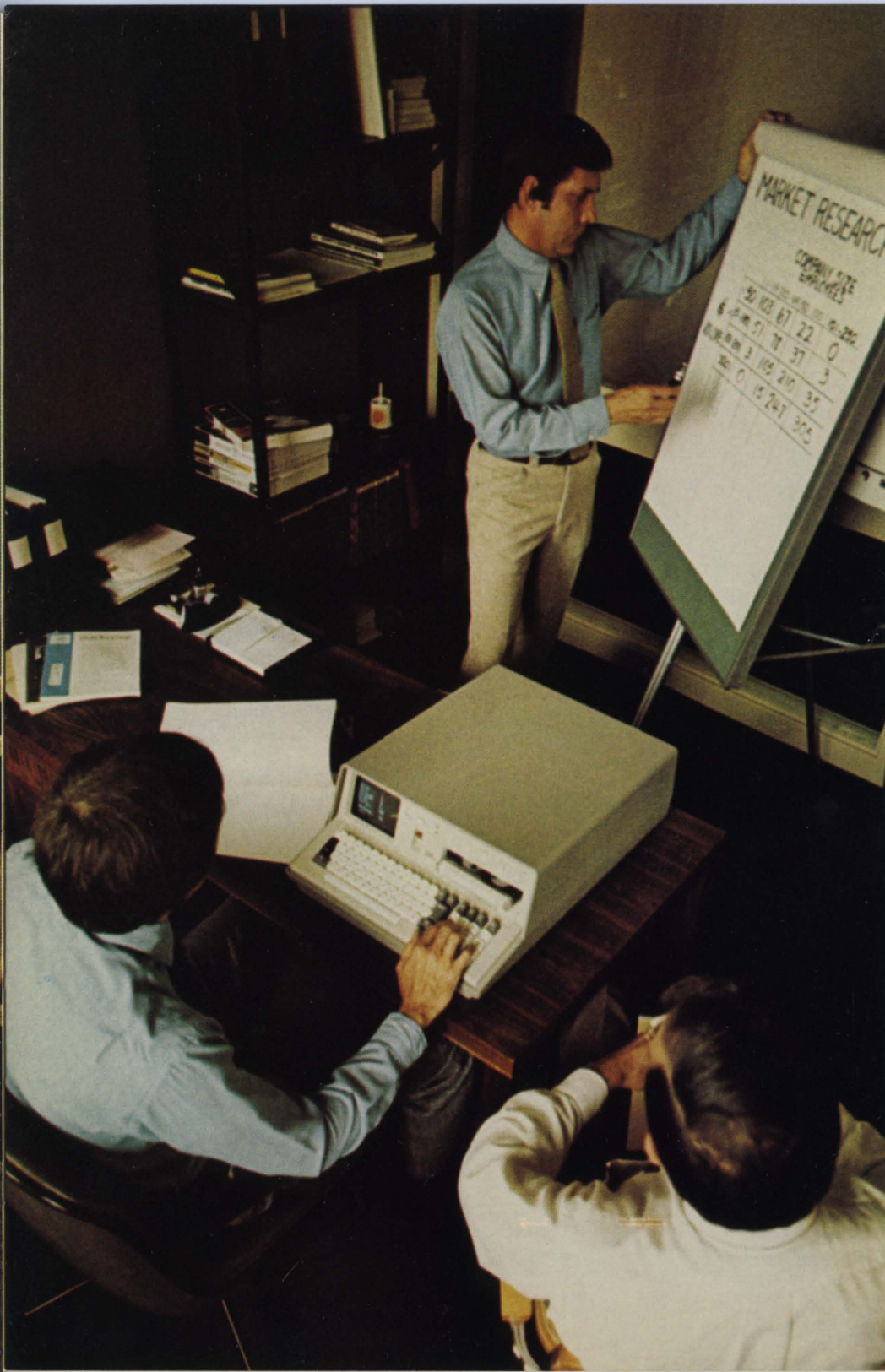




the size of an office typewriter







## business problem

3

ENTER FIRST REPORT TITLE LINE, EACH LINE CONSISTS OF  
2 ENTRIES IN QUOTES AND SEPARATED BY A COMMA.  
'NEW PRODUCT', 'COST ANALYSIS'

4

DO YOU NEED ANOTHER REPORT LINE? (0=NO, 1=YES)  
0  
ARE YOU USING A BASE PERIOD? (0=NO, 1=YES)  
0  
ENTER THE NO. OF SUBTOTAL COLUMNS.  
0  
ARE YOU USING A TOTAL COLUMN? (0=NO, 1=YES).  
1



5

ENTER A 2-LINE HEADING FOR EACH COL. SEPARATE LINES  
WITH A COMMA. ENTER ONE COLUMN HEADING AT A TIME.

'1975',  
'1976',  
'1977',  
'1978',  
'1979',  
'1980',  
'TOTAL',

ENTER THE NO. OF FRACTIONAL DIGITS (0,2 OR 3)  
THAT ARE TO BE PRINTED ON THE S.S. REPORT.

2

7

1=ADD 2 LINES,  
2=SUBTRACT 2 LINES,  
3=MULTIPLY 2 LINES,  
4=DIVIDE 2 LINES (FIRST BY SECOND),  
5=LINE VALUES MULTIPLIED BY A CONSTANT,  
6=CONSTANT ADDED TO LINE VALUES,  
7=FILL LINE WITH ONE VALUE, THEN OVERLAY POSSIBLE,  
8=SUM OF LINES (MAX. 5),  
9=USER'S ALGORITHM,  
10=DATA FROM KEYBOARD,  
11=ONE VALUE TO FILL A LINE,  
12=SUM OF A RANGE OF LINES.

ENTER LINE DESCRIPTION (IN QUOTES) & MANIP. CODE.  
'VOLUMES',10

Method of data entry is selected and a category name is created for the first line.

6

YOU ARE ENTERING LINE 2  
THE OPTIONS CODES ARE:  
0=TERMINATE RUN WITH PARTIAL SPREAD SHEET,  
1=LINE TO BE LEFT BLANK,  
2=LINE CREATED FROM A DATA FILE,  
3=LINE CREATED BY BUILD  
4=RE-CREATE LAST LINE,  
5=ENTER DESCRIPTION ONLY.

ENTER OPTION CODE.  
3

8

ENTER THE NO. OF FRACTIONAL DIGITS (0,2 OR 3) TO BE  
PRINTED AND 6 DATA FIELDS SEPARATED BY COMMAS.  
2,0,500,2000,4500,4000,2500



## NEW PRODUCT COST ANALYSIS

	1975	1976	1977	1978	1979	1980	TOTAL
1							
2 VOLUMES	0.00	500.00	2000.00	4500.00	4000.00	2500.00	13500.00
3							
4							
5 LABOR	0.00	625.00	2000.00	4050.00	3400.00	2050.00	12125.00
6 MATERIAL	0.00	50.00	200.00	450.00	400.00	250.00	1350.00
7 OVERHEAD	0.00	1250.00	4000.00	8100.00	6800.00	4100.00	24250.00
8 RESEARCH	400.00	100.00	50.00	25.00	0.00	0.00	575.00
9 =====							
10 TOTAL	400.00	2025.00	6250.00	12625.00	10600.00	6400.00	38300.00
11							
12							
13 UNIT COST	0.00	4.85	3.13	2.81	2.65	2.56	16.00
14 PRICE	0.00	4.49	4.49	4.49	4.49	4.49	22.45
15 =====							
16 PROFIT	-400.00	220.00	2730.00	7580.00	7360.00	4825.00	22315.00

The preceding screens show how data for line 2 is entered.  
 After all details have been keyed in, the IBM 5100 computes cost and profit.



10

THE METHOD CODES ARE:

- 1 SINGLE PAYMENT AMOUNT
- 2 LEVEL PAYMENT AMOUNT
- 3 VARYING PAYMENT AMOUNT
- 4 EFFECTIVE INTEREST RATE CALCULATION

1 - ENTER METHOD CODE.

3

THE TYPE CODES ARE:

- 1 PRESENT VALUE
- 2 FUTURE VALUE

2 - ENTER TYPE CODE.

1

To go on to a DISCOUNTED, CASH FLOW analysis, call the routine and the system responds.

12

PAYMENT AMOUNTS

PERIOD	AMOUNT
1	400.00
2	220.00
3	2730.00
4	7580.00
5	7360.00
6	4825.00

THE PRESENT VALUE OF A SERIES OF VARYING AMOUNTS  
RECEIVED ONE PER PERIOD, AT THE START OF 6 PERIODS IS  
13446.53

The answer to your projected present value of profit, is \$13,446.53. Substituting cost data, and following the same steps, you can project the present value of cost: \$24,430.43. This and other data can be stored for retrieval.

These techniques provide easy-to-use, quick and accurate evaluations of alternatives for decision making. One or more figures can be modified to compare several evaluations. With results displayed on the screen, you can review them before printing.

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WHEN AN AMOUNT IS RECEIVED (START OR END OF PERIOD),  
IT WILL BE COMPENSATED FOR IN PV/FV CALCULATIONS.  
ALL FV CALCULATIONS CARRY THRU TO END OF PERIOD.

3 - ENTER 1 IF THE PAYMENT IS RECEIVED AT START OF PERIOD.  
ENTER 2 IF THE PAYMENT IS RECEIVED AT END OF PERIOD.

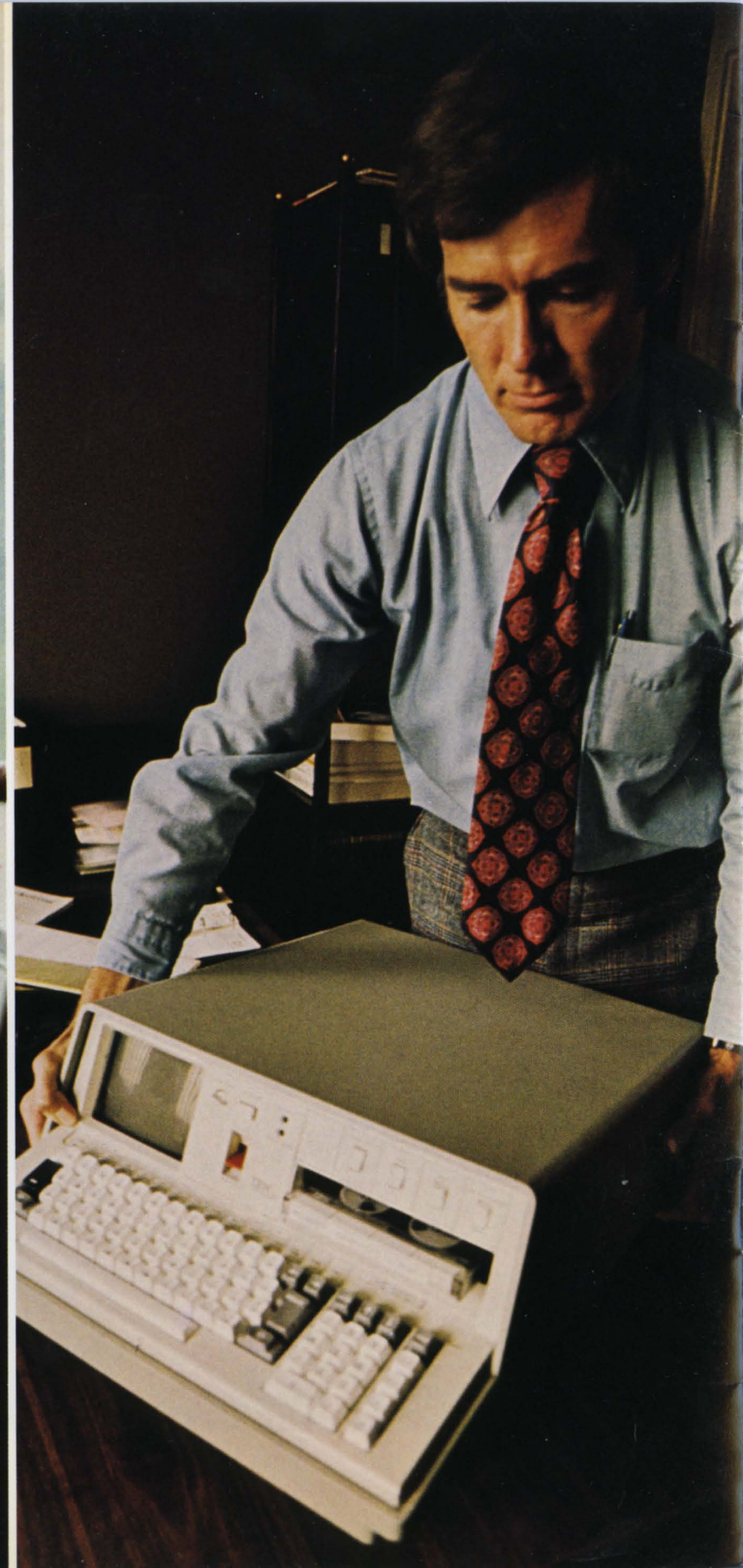
1

YOU ARE TO ENTER INTEREST RATE AND NO. OF PERIODS  
TO BE USED IN CALCULATING PV OR FV FOR A SERIES OF  
VARYING AMOUNTS RECEIVED ONE PER PERIOD.

4\* - ENTER INTEREST RATE AND NO. OF PERIODS (UP TO 50 ).

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The report and cathode ray tube displays shown  
in this brochure are simulated computer output,  
and are intended only to serve as examples.

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