Using INPUT

Another way to give the computer data is with the word INPUT. This lets you put in information while the program is running and you can use different data each time you run the program.
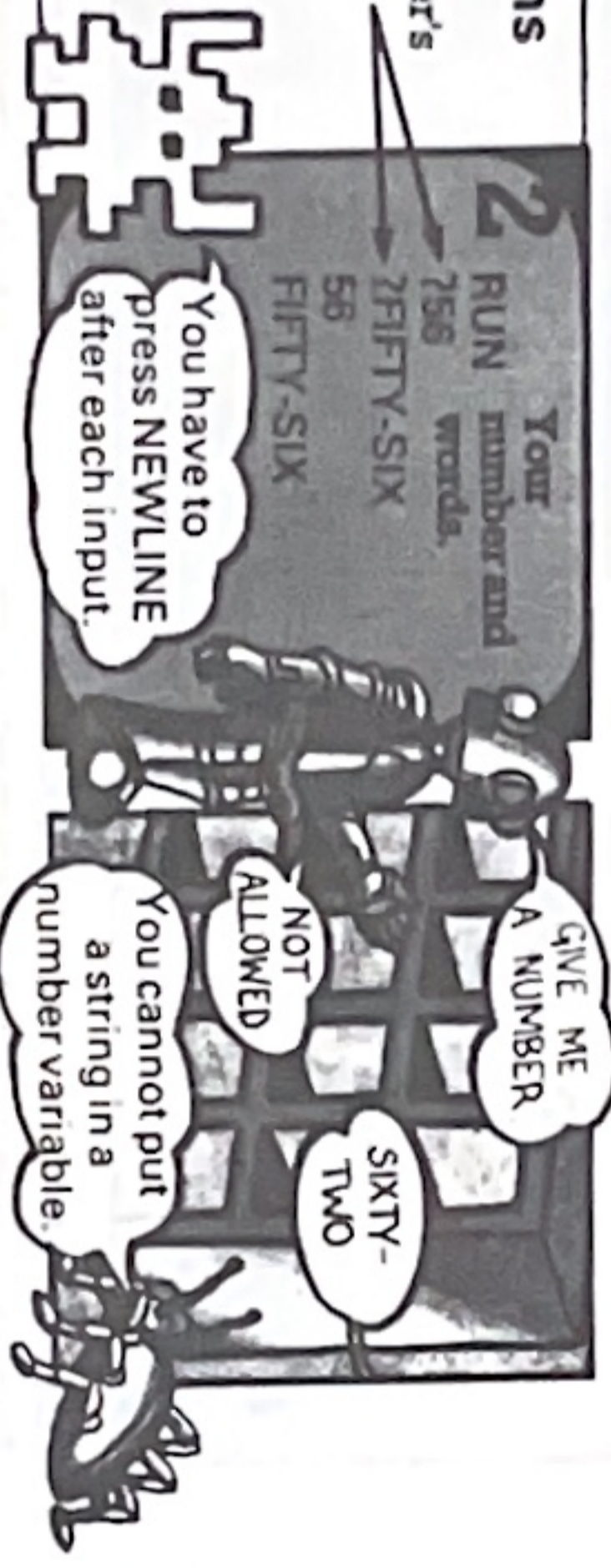
```
20  INPUT A
30  INPUT A$
```

For numbers

For words

You use INPUT with a label such as A for a number and A$ for a string. When the computer meets the word INPUT in a program it puts the label on a memory space and asks you for the data, usually by printing a question mark, or other symbol, on the screen. Then you type in the data and the computer stores it in the memory space and goes on with the rest of the program.
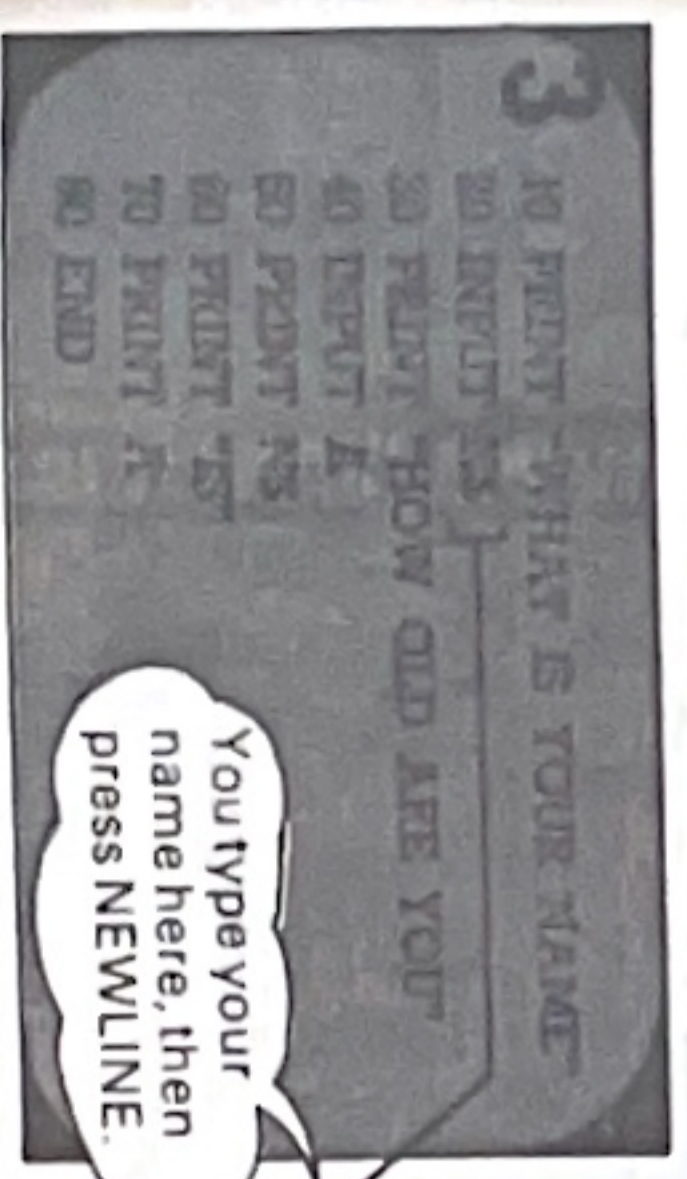
1 INPUT programs

```
10  INPUT G        Computer's
20  INPUT B$       question
30  PRINT G        marks
40  PRINT B$
50  END
```

You have to press NEWLINE after each input.

2

```
RUN         Your
756         number and
?FIFTY-SIX  words.
56
FIFTY-SIX
```

GIVE ME A NUMBER

NOT ALLOWED

SIXTY-TWO

You cannot put a string in a number variable

Picture 2 shows what happens when you run this program. When the computer meets the word INPUT in line 10 it prints a question mark on the screen and waits for you to type in a number for G. Then it prints another question mark for the INPUT instruction in line 20. This time you have to type in words or symbols as the label B$ told the computer to expect a string.

3

```
10 PRINT "WHAT IS YOUR NAME"
20 INPUT A$
30 PRINT "HOW OLD ARE YOU"
40 INPUT A
50 PRINT N$
60 PRINT "S"
70 PRINT A
80 END
```

You type your name here, then press NEWLINE.

4

```
RUN
WHAT IS YOUR NAME
?RUSTY ROBOT
HOW OLD ARE YOU
?17
17?
RUSTY ROBOT
```

If you have a computer, try typing in this program, then press RUN to start it off. When the computer asks you for information, type in your name and age, or a silly name and crazy number, as shown.

in the sample run above. Try it lots of times with different data, pressing RUN to start the program again each time. The computer always prints exactly what you put in N$ and A.

Poetry writing program

Now you know enough BASIC to write a poem on a computer. Here is a poetry writing program which uses PRINT and INPUT.

```
10  PRINT "WHAT IS YOUR NAME"
20  INPUT N$
30  PRINT "A POEM BY"
40  PRINT N$
50  PRINT "TYPE IN A WORD"
60  PRINT "THAT RHYMES WITH ME"
70  INPUT A$
80  PRINT "HERE IS THE POEM"
90  PRINT "COMPUTERS USED TO
    FRIGHTEN ME"
100 PRINT "BUT NOW I'M HAPPY AS A "
110 PRINT A$
120 END
```

This line prints out your name.

This line prints out your word.

Your name and word.

The program makes the computer ask you your name, then store your reply in N$ and print it out at line 40. It stores the word you choose in A$, then prints it out as part of the poem at line 110. If you have a computer try running the program lots of times, inputting different words at line 70.

You type run to try it again with another word

Checklist for typing in programs

1. Before typing in a new program type NEW. This clears any old programs and variables out of the computer's memory.

2. When you are typing in the program, remember to press NEWLINE, or your computer's word, at the end of each line.

3. After typing in the program, check all the lines on the screen to see if there are any typing mistakes. Make sure none of the lines are missing, too.

4. Next you can type CLS (or your computer's word) to clear the program off the screen. Then type RUN to start the program.

5. To get the program listing back again to check it or alter a line, type LIST. To display one particular line you can usually type LIST with the line number, but check this command as it varies slightly on different computers.

6. To stop the program while it is running type BREAK or ESCAPE. Check this command in your manual, though, as it varies on different computers. On some computers ESCAPE wipes the whole program out of the computer's memory. To start the program again type RUN.

15