

# Activity 5

## General

In some programs we need to jump to particular parts according to the value of some variable. Many programs are written in such a way as to cause only sections of them to be executed during any single program run. The section branched to can be selected by using the statement

ON...GOTO...

Type in and run the program shown in activity 5.1. This program illustrates how the statement, called a *computed GOTO*, works. Input values of K which are 1, 2, 3 and 4 in turn.

```
10 INPUT K
20 ON K THEN GOTO 50,70,90
30 PRINT "THEN NUMBER YOU HAVE INPUT IS NOT AN INTEGER BETWEEN 1 & 3"
40 STOP
50 PRINT "K WAS EQUAL TO 1"
60 GOTO 10
70 PRINT "K WAS EQUAL TO 2"
80 GOTO 10
90 PRINT "K WAS EQUAL TO 3"
100 GOTO 10
110 END
```

### Activity 5.1

The next step is to put the ON...GOTO... statement to work, and the program shown in activity 5.2 illustrates this.

```
10 PRINT " DO YOU REQUIRE A TABLE OF SQUARES,CUBES ";
20 PRINT " OR SQUARE ROOTS ?"
30 INPUT"TYPE IN 1,2, OR 3. 0 WILL STOP THE PROGRAM ";K
40 IF K=0 THEN STOP
50 ON K GOTO 80,140,200
60 PRINT "THE NUMBER MUST BE 1,2 OR 3"
70 GOTO 30
80 PRINT "TABLE OF SQUARES"
90 X=1
100 PRINT X;" SQUARED = ";X^2
110 X=X+1
120 IF X> 10 THEN 30
130 GOTO 100
140 PRINT "TABLE OF CUBES"
150 X=1
160 PRINT X;"CUBED = ";X^3
170 X=X+1
180 IF X>10 THEN 30
190 GOTO 140
200 PRINT "TABLE OF SQUARE ROOTS"
210 X=1
220 PRINT "SQUARE ROOT OF ";X;" = ";SQR(X)
230 X=X+1
240 IF X> 10 THEN 30
250 GOTO 2^0
260 END
```

### Activity 5.2