

11 Programming – Part 1 —Answers

Answers

11.1 A variable's value can change while the program runs; a constant's value is fixed and cannot change.

11.2 It adds 5 to the current value of `total` and stores the result back in `total`.

11.3 Use a `FOR` loop when you know in advance how many times to repeat (a count); use `WHILE` when you repeat until some condition changes.

11.4 A function returns a value to the place that called it; a procedure just carries out a job and returns nothing. (Any clear difference.)

11.5 It is the part of the program where the variable exists and can be used —only inside its own subroutine.

11.6 Any one: each subroutine can be written and tested on its own; it can be reused (called many times) instead of repeating code; the program is shorter and easier to read; different people can work on different subroutines.

11.7 For example:

```
FUNCTION bigger(a, b)
IF a > b THEN
RETURN a
ELSE
RETURN b
ENDIF
ENDFUNCTION
```