

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
```