

■ **Exercise 2-15:** Consider the following FORTRAN SUBROUTINE:

```
SUBROUTINE TEST (X, Y, Z)
  X = 1
  Z = X + Y
  RETURN
END
```

and consider the following code fragment:

```
N = 2
CALL TEST (N, N, M)
```

What will be the final value of M if the parameters are passed by reference? What will it be if they are passed by value-result?

■ **Exercise 2-16*:** There are several different varieties of pass by value-result: The address of the actual can be computed once, at subprogram entry time, or twice, once on entry and once on exit. Describe the output of this program under each of these two varieties of value-result:

```
DIMENSION A(2)
I = 1
A(1) = 10
A(2) = 11
CALL SUB (I, A(I))
PRINT, A(1), A(2)
END

SUBROUTINE SUB (K, X)
  PRINT, X
  K = 2
  X = 20
  RETURN
END
```

Does the outcome depend on the order in which the results are copied from the formals back into the actuals?