```fortran
 1: program raiz
 2: open(15,file="Aula06do02ex3.txt")
 3: TOLX = 1.E-6
 4: X = .1
 5: FOLD = func(x)
 6: DX = .5
 7: ITER = 0
 8: 10 continue
 9:     ITER = ITER + 1
10:     X = X + DX
11:     write(15,*)ITER, X
12:     if ((FOLD*FUNC(X)) .LT. 0) then
13:         X = X - DX
14:         DX = DX/2
15:     END IF
16:     if (ABS(DX) .GT. TOLX) GOTO 10
17: STOP
18: END
19:
20: real function func(x)
21: func = cos(x) - x
22: end
```