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 1: program aula20do02exer02
 2: PARAMETER (PI = ACOS(-1.0))
 3: open(14,file="euler2.txt")
 4: open(15,file="erro2.txt")
 5: H = 0.001
 6: NSTEP = (PI/3.)/H
 7: y = -1.
 8: DO IX = 0, NSTEP-1
 9:    X = IX*H
10:    Y = Y + H*func(X,Y)
11:    DIFF = EXATA(X+H)-Y
12:    erro = abs(DIFF/EXATA(X+H))
13:    write(14,*)X+H,Y,EXATA(X+H)
14:    WRITE(15,*)erro
15: enddo
16: end
17:
18: real function func(X,Y)
19:      func = cos(x)**2 - tan(x)*y
20: end
21:
22: real function exata(x)
23:      exata = sin(x)*cos(x) - cos(x)
24: end
```