

```

PROGRAM BISSECCAO
DOUBLE PRECISION F,X,A,B,TOL
INTEGER I
EXTERNAL F
TOL=1.0D-8 ! Tolerancia utilizada
10 WRITE(*,*) 'Entre com o valor de A:'
READ(*,*) A
WRITE(*,*) 'Entre com o valor de B:'
READ(*,*) B
IF (F(A)*F(B).GT.0) THEN
    WRITE(*,*) 'Erro na escolha do intervalo'
    GO TO 10
ENDIF
I=0
DO WHILE (B-A.GT.TOL)
    I = I+1
    X = (A+B)*0.5
    IF (F(A)*F(X).LT.0) THEN
        B=X
    ELSE
        A=X
    ENDIF
    WRITE(*,*) 'Iteracao:', I
    WRITE(*,*) 'X =', X
    WRITE(*,*) '-----'
ENDDO
WRITE(*,*) '*****'
WRITE(*,*) '-----'
WRITE(*,*) 'Valor x encontrado =', X
WRITE(*,*) 'Valor de f(x) na solucao =', F(X)
WRITE(*,*) 'Numero total de Iteracoes:', I
END

C
C *****
C
FUNCTION F(X)
DOUBLE PRECISION F,X
C F=X**2-4*X-1
C F=X**2+4*X-22
C F=X**3-5*X**2-2*X+1
F=X**5-15
END

```