RT-MAP-8401-C

PROCEDIMENTOS PARA CÁLCULOS EM SPLINES
Parte C - Listagem de Testes

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PARTE C - CAPITULO 0

LISTAGENS DE TESTES DOS PROCEDIMENTOS PARA CALCULOS COM SPLINES

BURROUGHS LARGE SYSTEMS ALGOL COMPILER, VERSION 33.260.144

D I F O N D I S K
= = = = = = = = = = =

```
$SET AUTOBIND
$BIND=FROM SPLCTO/=
      BEGIN

$INCLUDE "DECLARA"
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```
      FILE CR(KIND=READER),IMP(KIND=PRINTER);

%=============================================================================
%-----TESTE DOS PROCEDIMENTOS  BSX, BSX2  E  RPPSX ----------------------
%
%-----UTILIZA INTERV-LBISEC-BSRPP-BSMC-INVPTE-BSDX2-BSMCD
%
 BEGIN
 INTEGER M,N,I,J,K,LX;REAL Z,S,S1,S2;

 INTEGER L;
 FOR L :=1 STEP 1 UNTIL 7 DO BEGIN
 READ(CR,/,M,N);
 BEGIN
 REAL ARRAY YS1:N+MA,CS1:NA,XS1:NA,CPSO:N,1:MA;

%
 WRITE(IMP&SKIP 17);
 WRITE(IMP,<//,100("=")>);
 WRITE(IMP,<//,"TESTE DOS PROCEDIMENTOS BSX, BSX2  E  RPPSX">);
 WRITE(IMP,<X16,"UTILIZA INTERV, LBISEC , BSRPP, INVPTE, BSDX2 E BSMCD">
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);READ(CR,//,FOR I:=1 STEP 1 UNTIL N+M DO Y[I]);
 WRITE(IMP[SPACE 1]);
 READ(CR,//,FOR I:=1 STEP 1 UNTIL  N  DO C[I]);
 WRITE(IMP,</,"POLINOMIOS DE ORDEM M=",I3,X3,"B-SPLINES LINEARMENTE INDE
PENDENTES, N=",I3>,M,N);
 WRITE(IMP,<//,"PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLIN
ES">);
 WRITE(IMP,</,"  I",*(I4)>,N+M,FOR I:=1 STEP 1 UNTIL N+M DO I);
 WRITE(IMP,</,"Y(I)",*(F4.1)>,N+M,FOR I:=1 STEP 1 UNTIL N+M DO Y[I]);
 WRITE(IMP,<"C(I)",*(F4.1)>,N,FOR I:=1 STEP 1 UNTIL N DO C[I]);
 BSRPP(M,N,Y,C,K,X,CP);
 WRITE(IMP,<//,"COEFICIENTES DOS POLINOMIOS POR PARTES">);
 WRITE(IMP,</," K ",*("   C(",I1,")")>,M,FOR I:=0 STEP 1 UNTIL M-1 DO I)
; WRITE(IMP[SPACE 1]);
 FOR I:=0 STEP 1 UNTIL K DO
     WRITE(IMP,<I2,X1,*F7.2>,I,M,FOR J:=1 STEP 1 UNTIL M DO CP[I,J]);
 WRITE(IMP,<//,X5,"X",X13,"BSX",X12,"BSX2",X11,"RPPSX">);
 WRITE(IMP[SPACE 1]);
 Z:=Y[1] ; LX:=1 ;
 DO BEGIN
     S:=BSX(M,N,Y,C,Z,LX); S1:=BSX2(M,N,Y,C,Z,LX); S2:=RPPSX(K,M,X,CP,Z)
;    WRITE(IMP,<F6.2,3E16.8>,Z,S,S1,S2); Z:=Z+0.25  END
 UNTIL Z > Y[N+1]
 END; END; END;


%     TESTE  DO  PROCEDIMENTO  BSMQ -UTILIZA INTERV-LBISEC
%=============================================================
BEGIN INTEGER M,N,I,L,LX;  REAL X;

 WRITE(IMP[SKIP 1]);
     READ(CR,//,M,N);
BEGIN REAL ARRAY C[1:M+1],NM[1:N],Y[1:N+M];

     READ(CR,//,FOR I:=1 STEP 1 UNTIL N+M DO Y[I]);
     WRITE(IMP,<100("=")>);
     WRITE(IMP,<//,"TESTE DO PROCEDIMENTO BSMQ-UTILIZA INTERV-LBISEC">)
;    WRITE(IMP,</,"ENTRADA:PARTICAO ESTENDIDA E PONTOS DO INTERVALO">);
     WRITE(IMP,</,"POLINOMIOS DE ORDEM M=",I3>,M);
     WRITE(IMP,</,"B-SPLINES LINEARMENTE INDEPENDENTES,N=",I3>,N);
     WRITE(IMP,</,"PARTICAO ESTENDIDA">);
     WRITE(IMP,</,"  I ",*I4>,N+M,FOR I:=1 STEP 1 UNTIL M+N DO I);
     WRITE(IMP,</,"Y(I)",*F4.1>,N+M,FOR I:=1 STEP 1 UNTIL M+N DO Y[I]);
     X:=Y[1]; LX:=M;
     WRITE(IMP,<///,"AVALIACAO DOS B-SPLINES NORMALIZADOS EM PONTOS DO
INTERVALO (A,B)">);

     WRITE(IMP,</,"A=",F4.1,X3,"B=",F4.1>,Y[M],Y[N+1]);
     X:=Y[1]; LX:=M;
     WRITE(IMP,<//,"    X",*(X7,"NM",I1,"(X)")>,N,FOR I:=1 STEP 1 UNTIL
 N DO I);  WRITE(IMP,<90("*")>);  WRITE(IMP[SPACE 1]);
     DO
BEGIN FOR I:=1 STEP 1 UNTIL N DO NM[I]:=0;
     IF X=Y[N+1] THEN L:=N ELSE L:=INTERV(1,M+N,LX,X,Y); LX:=L;
     BSMQ(M,L,Y,X,C);
     FOR I:=1 STEP 1 UNTIL M DO NM[I+L-M]:=C[I];
     WRITE(IMP,<F5.2,*F13.8>,X,N,FOR I:=1 STEP 1 UNTIL N DO NM[I]);
     X:=X+0.25
END  UNTIL X > Y[N+1];
END; END;
```

```
%=================================================================
%-----TESTE DOS PROCEDIMENTOS BSDJX, BSDX, BSDX2  E  RPPDX ------------
%     UTILIZA BSRPP-BSMCD-INTERV-LBISEC-BSMQ-INVPTE
%-----------------------------------------------------------------
%
 BEGIN
 INTEGER M,N,I,J,K; REAL A,B,Z;

 INTEGER L;
 FOR L:=1 STEP 1 UNTIL 7 DO BEGIN
 READ(CR,//,M,N);
 BEGIN
 REAL ARRAY DX§1:MA,DX1§1:MA,DX2§1:MA,DX3§1:MA; INTEGER ARRAY LM§1:NA;

 REAL ARRAY Y§1:N+MA,C§1:NA,X§1:NA,CP§0:N,1:MA;
%
 WRITE(IMP§SKIP 1A);
 WRITE(IMP,<//,100("=")>);
 WRITE(IMP,<//,"TESTE DOS PROCEDIMENTOS BSDJX,BSDX,BSDX2 E RPPDX">);
 WRITE(IMP,<//,"UTILIZA BSRPP-BSMCD-INTERV-LBISEC-BSMQ-INVPTE">);
 READ(CR,//,FOR I:=1 STEP 1 UNTIL N+M DO Y§IA);
 READ(CR,//,FOR I:=1 STEP 1 UNTIL  N  DO C§IA);
 WRITE(IMP,<"POLINOMIOS DE ORDEM M=",I3,X3,"B-SPLINES LINEARMENTE INDEPE
NDENTES, N=",I3>,M,N);
 WRITE(IMP,<//,"PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLIN
ES">);
 WRITE(IMP,<//,"  I",*(I4)>,1+M,FOR I:=1 STEP 1 UNTIL N+M DO I);
 WRITE(IMP,<//,"Y(I)",*(F4.1)>,N+M,FOR I:=1 STEP 1 UNTIL N+M DO Y§IA);
 WRITE(IMP,<"C(I)",*(F4.1)>,N,FOR I:=1 STEP 1 UNTIL N DO C§IA);
 BSRPP(M,N,Y,C,K,X,CP);
 WRITE(IMP,<//,"COEFICIENTES DOS POLINOMIOS POR PARTES">);
 WRITE(IMP,<//," K ",*("   C(",I1,")")>,M,FOR I:=0 STEP 1 UNTIL M-1 DO I)
 ; WRITE(IMP§SPACE 1A);
 FOR I:=0 STEP 1 UNTIL K DO
     WRITE(IMP,<I2,X1,*F7.2>,I,M,FOR J:=1 STEP 1 UNTIL M DO CP§I,JA);
 INVPTE(M,N,Y,K,A,B,LM,X);
 WRITE(IMP,<//,"PARTICAO SIMPLES E VETOR DE MULTIPLICIDADE">);
 WRITE(IMP,<//,"EXTREMOS DO INTERVALO  A=",F4.1,"  B=",F4.1>,A,B);
 WRITE(IMP,<//,"  K",*(I4)>,K,FOR I:=1 STEP 1 UNTIL K DO I);
 WRITE(IMP,<//,"X(K)",*(F4.1)>,K,FOR I:=1 STEP 1 UNTIL K DO X§IA);
 WRITE(IMP,<"L(K)",I3,*I4>,LM§1A,K-1,FOR I:=2 STEP 1 UNTIL K DO LM§IA);
 WRITE(IMP§SKIP 1A);
 WRITE(IMP,<//,"AVALIACAO DA (J-1)-ESIMA DERIVADA DO SPLINE S EM X">);

 WRITE(IMP,<//,"   X  J        BSDJX          BSDX         BSDX2          RPP
DX">);
 WRITE(IMP,<59("*")>);
 Z:=Y§1A;
 DO BEGIN FOR J:=1 STEP 1 UNTIL M DO DX§JA:=BSDJX(M,N,Y,C,J,Z);
          BSDX(M,N,Y,C,Z,DX1); BSDX2(M,N,Y,C,Z,DX2);RPPSDX(K,M,X,CP,Z,DX
3);        WRITE(IMP§SPACE 1A);
          FOR I:=1 STEP 1 UNTIL M DO
              WRITE(IMP,<F4.1,I3,4E13.4>,Z,I,DX§IA,DX1§IA,DX2§IA,DX3§IA)
;         Z:=Z+0.5 END
 UNTIL Z > Y§N+1A
 END; END; END;
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%=====================================================================
%       TESTE  DE  BSXH,  BSX2I    E   BSRPPH
 BEGIN INTEGER N,K,M,I,J,LX;  REAL A,B,Z,SX,SX1,SX2,SX3,H;

       READ(CR,//,M,K,A,B);  N:=M+K;
 BEGIN REAL ARRAY C§1:NA,X§1:KA,Y§1:M+NA,CP§C:K,1:MA;

       INTEGER ARRAY LM§1:KA;
       READ(CR,//,FOR I:=1 STEP 1 UNTIL N DO C§IA);
       H:=(B-A)/(K+1);
       FOR I:=1 STEP 1 UNTIL K DO
 BEGIN      X§IA:= A + I*H ;  LM§IA:=1
 END;
       PTE(M,N,Y,K,A,B,LM,X);
       FOR I:= 1 STEP 1 UNTIL M DO
BEGIN      Y§IA:=A + (I-1)*H; Y§N+IA:= A + (N+I-M)*H
END;
       WRITE(IMP§SKIP 1A);
       WRITE(IMP,<100("=")>);
       WRITE(IMP,</,"TESTE DOS PROCEDIMENTOS BSXH, BSX2H E BSRPPH">);
       WRITE(IMP,</,"UTILIZA BSX,BSMQ,RPPSX,INTERV,LBISEQ,PTE E BSMQP">)
;      WRITE(IMP,<//,"ENTRADA:PARTICAO UNIFORME DEFINIDA POR A,B,K,M">);
       WRITE(IMP,</,"          PONTOS DO INTERVALO (A,B)">);
       WRITE(IMP,</,"          COEF. DA EXPANSAO EM B-SPLINES">);
       WRITE(IMP,<//,"POLINOMIOS DE ORDEM M=",I2>,M);
       WRITE(IMP,</,"NUMERO DE NOS DA PARTICAO UNIFORME K=",I3>,K);
       WRITE(IMP,</,"EXTREMOS DO INTERVALO-  A=",F4.1,X2,"B=",F4.1>,A,B)
;
       WRITE(IMP,<//,"SPLINES LINEARMENTE INDEPENDENTES, N=",I2>,N);
       WRITE(IMP,</,"PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-
SPLINES">);
       WRITE(IMP,</,"   I",*(I5)>,N+M,FOR I:=1 STEP 1 UNTIL N+M DO I);
       WRITE(IMP,</,"Y(I)",*(F5.1)>,N+M,FOR I:=1 STEP 1 UNTIL N+M DO Y§I
A);    WRITE(IMP,</,"C(I)",*(F5.1)>,N,FOR I:=1 STEP 1 UNTIL N DO C§IA);
       BSRPPH(A,B,K,M,C,,CP);
       WRITE(IMP,<//,"COEFICIENTES DOS POLINOMIOS POR PARTES">);
       WRITE(IMP,</," K ",*("   C(",I1,")")>,K+1,FOR I:=0 STEP 1 UNTIL K
 DO I); WRITE(IMP§SPACE 1A);
       FOR I:=0 STEP 1 UNTIL K DO
           WRITE(IMP,<I2,X3,*F7.2>,I,M,FOR J:=1 STEP 1 UNTIL M DO CP§I,J
A);
       WRITE(IMP,<//,X5,"X",X13,"BSX",X12,"BSXH",X11,"BSX2H",X11,"RPPSX"
>);    Z:=Y§MA; LX:=1;

       WRITE(IMP,<70("*")>);
       DO
BEGIN  SX:=BSX(M,N,Y,C,Z,LX); SX1:=BSXH(I,B,K,M,C,Z);
       SX2:=BSX2P(A,C,K,M,C,Z); SX3:=RPPSX(K,M,X,CP,Z);
       WRITE(IMP,<F6.2,4E16.8>,Z,SX,SX1,SX2,SX3);
       Z:=Z+0.5
END
       UNTIL Z > Y§N+1A
END; END;


%=====================================================================
%       TESTE DE BSMGRM
%
       BEGIN
       INTEGER N,M,I,J; REAL H;
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```
READ(CR,//,N,M);
BEGIN
REAL ARRAY ZÇ1:MÃ,WÇ1:MÃ, GÇ1:N,1:NÃ, YÇ1:N+MÃ;

READ(CR,//,FOR I:=1 STEP 1 UNTIL N+M DO YÇIÃ);
READ(CR,//,FOR I:=1 STEP 1 UNTIL M   DO ZÇIÃ);
READ(CR,//,FOR I:=1 STEP 1 UNTIL M   DO WÇIÃ);
WRITE(IMPÇSKIP 1Ã); WRITE(IMP,<//,100("=")>);
WRITE(IMP,</,"TESTE DO PROCEDIMENTO BSMGRM">);
WRITE(IMP,</,"UTILIZA BSMQ">);
WRITE(IMP,</,"POLINOMIOS DE ORDEM M=",I2>,M);
WRITE(IMP,</,"SPLINES POLINOMIAIS DE ORDEM N=",I2>,N);
WRITE(IMP,</,"PARTICAO ESTENDIDA">);
WRITE(IMP,</,"  I ",I5,12I8>,FOR I:=1 STEP 1 UNTIL N+M DO I);
WRITE(IMP,<"Y(I)",13F8.2>,FOR I:=1 STEP 1 UNTIL N+M DO YÇIÃ);
WRITE(IMP,<//,"Z(I) E W(I) DA FORMULA DE GAUSS CORRESPONDENTE AO
INTERVALO Ç-1,1Ã E M=4">); WRITE(IMPÇSPACE 1Ã);
WRITE(IMP,<//,"ZÇIÃ",7F15.10>, FOR I:=1 STEP 1 UNTIL M DO ZÇIÃ);
WRITE(IMP,<//,"WÇIÃ",7F15.10>,FOR I:=1 STEP 1 UNTIL M DO WÇIÃ);
BSMGRM(M,N,Y,W,Z,G); WRITE(IMP,<//,"MATRIZ DE GRAM",//>);
FOR I:=1 STEP 1 UNTIL N DO
 WRITE(IMP,</,13F9.4>,FOR J:=1 STEP 1 UNTIL N  DO GÇI,JÃ);
WRITE(IMPÇSKIP 1Ã);
WRITE(IMP,<//,"CALCULO DO PRODUTO INTERNO G(5,5)=(N5,N5)">);
WRITE(IMP,<"SOBRE OS NOS 5,6,6+10**(-R),8,9 PARA R=0,1,...,9">);
H:=10; WRITE(IMP,<///,"       Y(7)             (N5,N5)">);
FOR I:=1 STEP 1 UNTIL 10 DO BEGIN H:=H/10; YÇ7Ã:=YÇ6Ã+H;
BSMGRM(M,N,Y,W,Z,G); WRITE(IMP,<F13.10,X3,F14.11>,YÇ7Ã,GÇ5,5Ã)
                             END;
END;

END;
%==============================================================
END.

=====================================================================
S DETECTED = 0.
NTS = 46.  TOTAL SEGMENT SIZE = 2395 WORDS.  CORE ESTIMATE = 4176 WORDS.  STA
291 CARDS, 6110 SYNTACTIC ITEMS, 164 DISK SEGMENTS.
ME:  (E30COC)CIR ON PACK.
E = 16.559 SECONDS ELAPSED;  5.773 SECONDS PROCESSING;  2.094 SECONDS I/O.
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TESTE DOS PROCEDIMENTOS BSX, BSX2  E  RPPSX
                UTILIZA INTERV, LBISEC , BSRPP, INVPTE, BSDX2 E DSMCD


POLINOMIOS DE ORDEM M=  3   B-SPLINES LINEARMENTE INDEPENDENTES, N= 11


PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

  I    1    2    3    4    5    6    7    8    9   10   11   12   13   14

Y(I) 1.0  1.0  1.0  2.0  2.0  3.0  3.0  4.0  4.0  5.0  5.0  6.0  6.0  6.0
C(I) 1.0  1.0  1.0  1.0  1.0  1.0  1.0  1.0  1.0  1.0  1.0


COEFICIENTES DOS POLINOMIOS POR PARTES

 K     C(0)     C(1)     C(2)

 0     1.00     0.00     0.00
 1     1.00     0.00     0.00
 2     1.00     0.00     0.00
 3     1.00     0.00     0.00
 4     1.00     0.00     0.00

     X                BSX                BSX2               RPPSX

  1.00   1.000000000E+00   1.000000000E+00   1.000000000E+00
  1.25   1.000000000E+00   1.000000000E+00   1.000000000E+00
  1.50   1.000000000E+00   1.000000000E+00   1.000000000E+00
  1.75   1.000000000E+00   1.000000000E+00   1.000000000E+00
  2.00   1.000000000E+00   1.000000000E+00   1.000000000E+00
  2.25   1.000000000E+00   1.000000000E+00   1.000000000E+00
  2.50   1.000000000E+00   1.000000000E+00   1.000000000E+00
  2.75   1.000000000E+00   1.000000000E+00   1.000000000E+00
  3.00   1.000000000E+00   1.000000000E+00   1.000000000E+00
  3.25   1.000000000E+00   1.000000000E+00   1.000000000E+00
  3.50   1.000000000E+00   1.000000000E+00   1.000000000E+00
  3.75   1.000000000E+00   1.000000000E+00   1.000000000E+00
  4.00   1.000000000E+00   1.000000000E+00   1.000000000E+00
  4.25   1.000000000E+00   1.000000000E+00   1.000000000E+00
  4.50   1.000000000E+00   1.000000000E+00   1.000000000E+00
  4.75   1.000000000E+00   1.000000000E+00   1.000000000E+00
  5.00   1.000000000E+00   1.000000000E+00   1.000000000E+00
  5.25   1.000000000E+00   1.000000000E+00   1.000000000E+00
  5.50   1.000000000E+00   1.000000000E+00   1.000000000E+00
  5.75   1.000000000E+00   1.000000000E+00   1.000000000E+00
  6.00   1.000000000E+00   1.000000000E+00   1.000000000E+00
```

TESTE DOS PROCEDIMENTOS BSX, BSX2 E RPPSX
UTILIZA INTERV, LDISCO , PSRPP, INVPTE, BSDX2 E BSMCO

POLINOMIOS DE ORDEM M= 3 B-SPLINES LINEARMENTE INDEPENDENTES, N= 11

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10	11	12	13	14
T(I)	1.0	1.0	1.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	6.0	6.0	6.0
C(I)	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	8.0	7.0			

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)
0	3.00	2.00	0.00
1	3.00	2.00	0.00
2	5.00	2.00	0.00
3	7.00	2.00	0.00
4	9.00	-2.00	0.00

X	BSX	BSX2	RPPSX
1.00	1.00000000E+00	1.00000000E+00	1.00000000E+00
1.25	1.50000000E+00	1.50000000E+00	1.50000000E+00
1.50	2.00000000E+00	2.00000000E+00	2.00000000E+00
1.75	2.50000000E+00	2.50000000E+00	2.50000000E+00
2.00	3.00000000E+00	3.00000000E+00	3.00000000E+00
2.25	3.50000000E+00	3.50000000E+00	3.50000000E+00
2.50	4.00000000E+00	4.00000000E+00	4.00000000E+00
2.75	4.50000000E+00	4.50000000E+00	4.50000000E+00
3.00	5.00000000E+00	5.00000000E+00	5.00000000E+00
3.25	5.50000000E+00	5.50000000E+00	5.50000000E+00
3.50	6.00000000E+00	6.00000000E+00	6.00000000E+00
3.75	6.50000000E+00	6.50000000E+00	6.50000000E+00
4.00	7.00000000E+00	7.00000000E+00	7.00000000E+00
4.25	7.50000000E+00	7.50000000E+00	7.50000000E+00
4.50	8.00000000E+00	8.00000000E+00	8.00000000E+00
4.75	8.50000000E+00	8.50000000E+00	8.50000000E+00
5.00	9.00000000E+00	9.00000000E+00	9.00000000E+00
5.25	8.50000000E+00	8.50000000E+00	8.50000000E+00
5.50	8.00000000E+00	8.00000000E+00	8.00000000E+00
5.75	7.50000000E+00	7.50000000E+00	7.50000000E+00
6.00	7.00000000E+00	7.00000000E+00	7.00000000E+00

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TESTE DOS PROCEDIMENTOS BSX, BSX2 E RPPSX
UTILIZA INTERV, LBISLC , BSRPP, INVPTE, BSDX2 E BSMCD

POLINOMIOS DE ORDEM M= 3 B-SPLINES LINEARMENTE INDEPENDENTES, N= 15

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
T(I)	1.0	1.0	1.0	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.0	4.0	5.0	5.0	5.0	6.0	6.0	6.0
C(I)	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0			

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)
0	3.00	2.00	0.00
1	4.00	2.00	0.00
2	7.00	2.00	0.00
3	8.00	-2.00	0.00
4	5.00	-2.00	0.00

X	BSX	BSX2	RPPSX
1.00	1.000000000E+00	1.000000000E+00	1.000000000E+00
1.25	1.500000000E+00	1.500000000E+00	1.500000000E+00
1.50	2.000000000E+00	2.000000000E+00	2.000000000E+00
1.75	2.500000000E+00	2.500000000E+00	2.500000000E+00
2.00	4.000000000E+00	4.000000000E+00	4.000000000E+00
2.25	4.500000000E+00	4.500000000E+00	4.500000000E+00
2.50	5.000000000E+00	5.000000000E+00	5.000000000E+00
2.75	5.500000000E+00	5.500000000E+00	5.500000000E+00
3.00	7.000000000E+00	7.000000000E+00	7.000000000E+00
3.25	7.500000000E+00	7.500000000E+00	7.500000000E+00
3.50	8.000000000E+00	8.000000000E+00	8.000000000E+00
3.75	8.500000000E+00	8.500000000E+00	8.500000000E+00
4.00	8.000000000E+00	8.000000000E+00	8.000000000E+00
4.25	7.500000000E+00	7.500000000E+00	7.500000000E+00
4.50	7.000000000E+00	7.000000000E+00	7.000000000E+00
4.75	6.500000000E+00	6.500000000E+00	6.500000000E+00
5.00	5.000000000E+00	5.000000000E+00	5.000000000E+00
5.25	4.500000000E+00	4.500000000E+00	4.500000000E+00
5.50	4.000000000E+00	4.000000000E+00	4.000000000E+00
5.75	3.500000000E+00	3.500000000E+00	3.500000000E+00
6.00	3.000000000E+00	3.000000000E+00	3.000000000E+00

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TESTE DOS PROCEDIMENTOS BSX, BSX2 E RPPSX
UTILIZA INTERV, LBISEC , BSRPP, INVPTE, BSDX2 E BSNCD

POLINOMIOS DE ORDEM M= 3 B-SPLINES LINEARMENTE INDEPENDENTES, N= 15

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
T(I)	1.0	1.0	1.0	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.0	4.0	5.0	5.0	5.0	6.0	6.0	6.0
C(I)	1.0	2.0	4.0	5.0	6.0	3.0	7.0	8.0	9.0	5.0	4.0	3.0	2.0	1.0	5.0			

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)
0	4.00	4.00	1.00
1	5.00	2.00	-4.00
2	7.00	2.00	0.00
3	5.00	-2.00	0.00
4	2.00	-2.00	5.00

X	BSX	BSX2	RPPSX
1.00	1.000000000E+00	1.000000000E+00	1.000000000E+00
1.25	1.562500000E+00	1.562500000E+00	1.562500000E+00
1.50	2.250000000E+00	2.250000000E+00	2.250000000E+00
1.75	3.062500000E+00	3.062500000E+00	3.062500000E+00
2.00	5.000000000E+00	5.000000000E+00	5.000000000E+00
2.25	5.250000000E+00	5.250000000E+00	5.250000000E+00
2.50	5.000000000E+00	5.000000000E+00	5.000000000E+00
2.75	4.250000000E+00	4.250000000E+00	4.250000000E+00
3.00	7.000000000E+00	7.000000000E+00	7.000000000E+00
3.25	7.500000000E+00	7.500000000E+00	7.500000000E+00
3.50	8.000000000E+00	8.000000000E+00	8.000000000E+00
3.75	8.500000000E+00	8.500000000E+00	8.500000000E+00
4.00	5.000000000E+00	5.000000000E+00	5.000000000E+00
4.25	4.500000000E+00	4.500000000E+00	4.500000000E+00
4.50	4.000000000E+00	4.000000000E+00	4.000000000E+00
4.75	3.500000000E+00	3.500000000E+00	3.500000000E+00
5.00	2.000000000E+00	2.000000000E+00	2.000000000E+00
5.25	1.812500000E+00	1.812500000E+00	1.812500000E+00
5.50	2.250000000E+00	2.250000000E+00	2.250000000E+00
5.75	3.312500000E+00	3.312500000E+00	3.312500000E+00
6.00	5.000000000E+00	5.000000000E+00	5.000000000E+00

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TESTE DOS PROCEDIMENTOS BSX, BSX2 E RPPSX
UTILIZA INTERV, LBISEC , BSRPP, INVPTE, BSDX2 E BSMCD

POLINOMIOS DE ORDEM M= 3 B-SPLINES LINEARMENTE INDEPENDENTES, N= 7

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10
Y(I)	1.0	1.0	1.0	2.0	3.0	4.0	5.0	6.0	6.0	6.0
C(I)	1.0	2.0	3.0	4.0	5.0	6.0	7.0			

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)
0	2.50	1.00	-0.50
1	2.50	1.00	0.00
2	3.50	1.00	0.00
3	4.50	1.00	0.00
4	5.50	1.00	0.50

X	BSX	BSX2	RPPSX
1.00	1.000000000E+00	1.000000000E+00	1.000000000E+00
1.25	1.468750000E+00	1.468750000E+00	1.468750000E+00
1.50	1.875000000E+00	1.875000000E+00	1.875000000E+00
1.75	2.218750000E+00	2.218750000E+00	2.218750000E+00
2.00	2.500000000E+00	2.500000000E+00	2.500000000E+00
2.25	2.750000000E+00	2.750000000E+00	2.750000000E+00
2.50	3.000000000E+00	3.000000000E+00	3.000000000E+00
2.75	3.250000000E+00	3.250000000E+00	3.250000000E+00
3.00	3.500000000E+00	3.500000000E+00	3.500000000E+00
3.25	3.750000000E+00	3.750000000E+00	3.750000000E+00
3.50	4.000000000E+00	4.000000000E+00	4.000000000E+00
3.75	4.250000000E+00	4.250000000E+00	4.250000000E+00
4.00	4.500000000E+00	4.500000000E+00	4.500000000E+00
4.25	4.750000000E+00	4.750000000E+00	4.750000000E+00
4.50	5.000000000E+00	5.000000000E+00	5.000000000E+00
4.75	5.250000000E+00	5.250000000E+00	5.250000000E+00
5.00	5.500000000E+00	5.500000000E+00	5.500000000E+00
5.25	5.781250000E+00	5.781250000E+00	5.781250000E+00
5.50	6.125000000E+00	6.125000000E+00	6.125000000E+00
5.75	6.531250000E+00	6.531250000E+00	6.531250000E+00
6.00	7.000000000E+00	7.000000000E+00	7.000000000E+00

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TESTE DOS PROCEDIMENTOS BSX, BSX2  E  RPPSX
                UTILIZA INTERV, LOISEC , BSRPP, INVPTE, BSDX2 E BSMOD

POLINOMIOS DE ORDEM M=  3   B-SPLINES LINEARMENTE INDEPENDENTES, N=  7

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

  I   1   2   3   4   5   6   7   8   9  10

T(I) 1.0 1.0 1.0 2.0 3.0 4.0 5.0 6.0 6.0 6.0
C(I) 1.0 3.0 5.0 6.0 7.0 5.0 4.0

COEFICIENTES DOS POLINOMIOS POR PARTES

 K     C(0)    C(1)    C(2)

 0     4.00    2.00   -1.00
 1     4.00    2.00   -0.50
 2     5.50    1.00    0.00
 3     6.50    1.00   -1.50
 4     6.00   -2.00    0.00

     X              BSX             BSX2            RPPSX

  1.00  1.000000000E+00  1.000000000E+00  1.000000000E+00
  1.25  1.937500000E+00  1.937500000E+00  1.937500000E+00
  1.50  2.750000000E+00  2.750000000E+00  2.750000000E+00
  1.75  3.437500000E+00  3.437500000E+00  3.437500000E+00
  2.00  4.000000000E+00  4.000000000E+00  4.000000000E+00
  2.25  4.468750000E+00  4.468750000E+00  4.468750000E+00
  2.50  4.875000000E+00  4.875000000E+00  4.875000000E+00
  2.75  5.218750000E+00  5.218750000E+00  5.218750000E+00
  3.00  5.500000000E+00  5.500000000E+00  5.500000000E+00
  3.25  5.750000000E+00  5.750000000E+00  5.750000000E+00
  3.50  6.000000000E+00  6.000000000E+00  6.000000000E+00
  3.75  6.250000000E+00  6.250000000E+00  6.250000000E+00
  4.00  6.500000000E+00  6.500000000E+00  6.500000000E+00
  4.25  6.656250000E+00  6.656250000E+00  6.656250000E+00
  4.50  6.625000000E+00  6.625000000E+00  6.625000000E+00
  4.75  6.406250000E+00  6.406250000E+00  6.406250000E+00
  5.00  6.000000000E+00  6.000000000E+00  6.000000000E+00
  5.25  5.500000000E+00  5.500000000E+00  5.500000000E+00
  5.50  5.000000000E+00  5.000000000E+00  5.000000000E+00
  5.75  4.500000000E+00  4.500000000E+00  4.500000000E+00
  6.00  4.000000000E+00  4.000000000E+00  4.000000000E+00
```

TESTE DOS PROCEDIMENTOS BSX, BSX2 E RPPSX
UTILIZA INTERV, LBISEC , BSRPP, INVPTE, BSDX2 E BSMCD

POLINOMIOS DE ORDEM M= 4 B-SPLINES LINEARMENTE INDEPENDENTES, N= 12

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Y(I)	0.0	0.0	0.0	0.0	2.0	2.0	3.0	3.0	3.0	5.0	6.0	6.0	9.0	9.0	9.0	9.0
C(I)	3.0	5.0	1.0	4.0	7.0	6.0	3.0	5.0	7.0	8.0	9.0	5.0				

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)	C(3)
0	3.00	3.00	4.50	1.50
1	3.00	3.00	6.00	-6.00
2	6.00	-4.50	3.25	-0.54
3	5.67	2.00	0.00	-0.42
4	7.25	0.75	0.08	-0.19

X	BSX	BSX2	RPPSX
0.00	3.00000000E+00	3.00000000E+00	3.00000000E+00
0.25	3.49218750E+00	3.49218750E+00	3.49218750E+00
0.50	3.56250000E+00	3.56250000E+00	3.56250000E+00
0.75	3.35156250E+00	3.35156250E+00	3.35156250E+00
1.00	3.00000000E+00	3.00000000E+00	3.00000000E+00
1.25	2.64843750E+00	2.64843750E+00	2.64843750E+00
1.50	2.43750000E+00	2.43750000E+00	2.43750000E+00
1.75	2.50781250E+00	2.50781250E+00	2.50781250E+00
2.00	3.00000000E+00	3.00000000E+00	3.00000000E+00
2.25	4.03125000E+00	4.03125000E+00	4.03125000E+00
2.50	5.25000000E+00	5.25000000E+00	5.25000000E+00
2.75	6.09375000E+00	6.09375000E+00	6.09375000E+00
3.00	6.00000000E+00	6.00000000E+00	6.00000000E+00
3.25	5.06966146E+00	5.06966146E+00	5.06966146E+00
3.50	4.49479167E+00	4.49479167E+00	4.49479167E+00
3.75	4.22460937E+00	4.22460937E+00	4.22460937E+00
4.00	4.20833333E+00	4.20833333E+00	4.20833333E+00
4.25	4.39518229E+00	4.39518229E+00	4.39518229E+00
4.50	4.73437500E+00	4.73437500E+00	4.73437500E+00
4.75	5.17513021E+00	5.17513021E+00	5.17513021E+00
5.00	5.66666667E+00	5.66666667E+00	5.66666667E+00
5.25	6.16015625E+00	6.16015625E+00	6.16015625E+00
5.50	6.61458333E+00	6.61458333E+00	6.61458333E+00
5.75	6.99088542E+00	6.99088542E+00	6.99088542E+00
6.00	7.25000000E+00	7.25000000E+00	7.25000000E+00
6.25	7.43967014E+00	7.43967014E+00	7.43967014E+00
6.50	7.62152778E+00	7.62152778E+00	7.62152778E+00
6.75	7.77734375E+00	7.77734375E+00	7.77734375E+00

7.00	7.88888889E+00	7.88888889E+00	7.88888889E+00
7.25	7.93793403E+00	7.93793403E+00	7.93793403E+00
7.50	7.90625000E+00	7.90625000E+00	7.90625000E+00
7.75	7.77560764E+00	7.77560764E+00	7.77560764E+00
8.00	7.52777778E+00	7.52777778E+00	7.52777778E+00
8.25	7.14453125E+00	7.14453125E+00	7.14453125E+00
8.50	6.60763889E+00	6.60763889E+00	6.60763889E+00
8.75	5.89887153E+00	5.89887153E+00	5.89887153E+00
9.00	5.00000000E+00	5.00000000E+00	5.00000000E+00

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TESTE DOS PROCEDIMENTOS BSDJX,BSDX,BSDX2 E RPPDX

UTILIZA BSNPP-BSMCD-INTERV-LBISEC-BSMQ-INVPTE
POLINOMIOS DE ORDEM M= 3 B-SPLINES LINEARMENTE INDEPENDENTES, N= 11

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10	11	12	13	14
T(I)	1.0	1.0	1.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	6.0	6.0	6.0
C(I)	1.0	5.0	7.0	4.0	1.0	2.0	6.0	8.0	9.0	5.0	1.0			

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)
0	7.00	4.00	-2.00
1	7.00	-5.00	0.00
2	1.00	2.00	3.00
3	6.00	4.00	-1.00
4	9.00	-8.00	0.00

PARTICAO SIMPLES E VETOR DE MULTIPLICIDADE

EXTREMOS DO INTERVALO A= 1.0 B= 6.0

K	1	2	3	4
X(K)	2.0	3.0	4.0	5.0
L(K)	2	2	2	2

AVALIACAO DA (J-1)-ESIMA DERIVADA DO SPLINE S EM X

X	J	BSDJX	BSDX	BSDX2	BPPDX
1.0	1	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
1.0	2	8.0000E+00	8.0000E+00	8.0000E+00	8.0000E+00
1.0	3	-4.0000E+00	-4.0000E+00	-4.0000E+00	-4.0000E+00
1.5	1	4.5000E+00	4.5000E+00	4.5000E+00	4.5000E+00
1.5	2	6.0000E+00	6.0000E+00	6.0000E+00	6.0000E+00
1.5	3	-4.0000E+00	-4.0000E+00	-4.0000E+00	-4.0000E+00
2.0	1	7.0000E+00	7.0000E+00	7.0000E+00	7.0000E+00
2.0	2	-6.0000E+00	-6.0000E+00	-6.0000E+00	-6.0000E+00
2.0	3	0.	0.	0.	0.
2.5	1	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
2.5	2	-6.0000E+00	-6.0000E+00	-6.0000E+00	-6.0000E+00
2.5	3	0.	0.	0.	0.
3.0	1	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
3.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
3.0	3	6.0000E+00	6.0000E+00	6.0000E+00	6.0000E+00
3.5	1	2.7500E+00	2.7500E+00	2.7500E+00	2.7500E+00
3.5	2	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
3.5	3	6.0000E+00	6.0000E+00	6.0000E+00	6.0000E+00
4.0	1	6.0000E+00	6.0000E+00	6.0000E+00	6.0000E+00
4.0	2	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
4.0	3	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
4.5	1	7.7500E+00	7.7500E+00	7.7500E+00	7.7500E+00
4.5	2	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
4.5	3	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
5.0	1	9.0000E+00	9.0000E+00	9.0000E+00	9.0000E+00
5.0	2	-8.0000E+00	-8.0000E+00	-8.0000E+00	-8.0000E+00
5.0	3	0.	0.	0.	0.
5.5	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
5.5	2	-8.0000E+00	-8.0000E+00	-8.0000E+00	-8.0000E+00
5.5	3	0.	0.	0.	0.
6.0	1	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
6.0	2	-8.0000E+00	-8.0000E+00	-8.0000E+00	-8.0000E+00
6.0	3	0.	0.	0.	0.

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TESTE DO PROCEDIMENTO BSMGRM

UTILIZA BSMQ

POLINOMIOS DE ORDEM M= 4

SPLINES POLINOMIAIS DE ORDEM N= 9

PARTICAO ESTENDIDA

  I      1       2       3       4       5       6       7       8       9       10      11
Y(I)   4.00    4.00    4.00    4.00    5.00    6.00    7.00    8.00    9.00   10.00   10.00

Z(I) E W(I) DA FORMULA DE GAUSS CORRESPONDENTE AO INTERVALO S=1,1X E M=4

Z(I)  -0.8611363116  -0.3399810436   0.3399810436   0.8611363116

W(I)   0.3478548451   0.6521451549   0.6521451549   0.3478548451

MATRIZ DE GRAM

 0.1429  0.0875  0.0185  0.0012  0.0000  0.0000  0.0000  0.0000  0.0000
 0.0875  0.2214  0.1563  0.0345  0.0003  0.0000  0.0000  0.0000  0.0000
 0.0185  0.1563  0.3268  0.2246  0.0237  0.0002  0.0000  0.0000  0.0000
 0.0012  0.0345  0.2246  0.4794  0.2363  0.0238  0.0002  0.0000  0.0000
 0.0000  0.0003  0.0237  0.2363  0.4794  0.2363  0.0237  0.0003  0.0000
 0.0000  0.0000  0.0002  0.0238  0.2363  0.4794  0.2246  0.0345  0.0012
 0.0000  0.0000  0.0000  0.0002  0.0237  0.2246  0.3268  0.1562  0.0185
 0.0000  0.0000  0.0000  0.0000  0.0003  0.0345  0.1562  0.2214  0.0875
 0.0000  0.0000  0.0000  0.0000  0.0000  0.0012  0.0185  0.0875  0.1429
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TESTE DOS PROCEDIMENTOS BSDJX,BSDX,BSDX2 E PPPDX

UTILIZA BSPPP-BSMCO-INTERV-LBISEC-BSMQ-INVPTE
POLINOMIOS DE ORDEM M=  3   B-SPLINES LINEARMENTE INDEPENDENTES, N= 11


PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

  I    1    2    3    4    5    6    7    8    9   10   11   12   13   14

Y(I) 1.0  1.0  1.0  2.0  2.0  3.0  3.0  4.0  4.0  5.0  5.0  6.0  6.0  6.0
C(I) 1.0  2.0  3.0  4.0  5.0  6.0  7.0  8.0  9.0  8.0  7.0


COEFICIENTES DOS POLINOMIOS POR PARTES

 K     C(0)     C(1)     C(2)

 0     3.00     2.00     0.00
 1     3.00     2.00     0.00
 2     5.00     2.00     0.00
 3     7.00     2.00     0.00
 4     9.00    -2.00     0.00


PARTICAO SIMPLES E VETOR DE MULTIPLICIDADE

EXTREMOS DO INTERVALO  A= 1.0  B= 6.0

  K    1    2    3    4

X(K) 2.0  3.0  4.0  5.0
L(K)  2    2    2    2
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TESTE DO PROCEDIMENTO BSMQ-UTILIZA INTERV-LBISEC

ENTRADA:PARTICAO ESTENDIDA E PONTOS DO INTERVALO

POLINOMIOS DE ORDEM M=  3

B-SPLINES LINEARMENTE INDEPENDENTES,N=  7

PARTICAO ESTENDIDA

  I    1    2    3    4    5    6    7    8    9   10

Y(I) 0.0  0.0  0.0  1.0  1.0  3.0  4.0  6.0  6.0  6.0
```

AVALIACAO DOS B-SPLINES NORMALIZADOS EM PONTOS DO INTERVALO (A,B)

A= 0.0 B= 6.0

X	NM1(X)	NM2(X)	NM3(X)	NM4(X)	NM5(X)	NM6(X)	NM7(X)
0.00	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
0.25	0.56250000	0.37500000	0.06250000	0.00000000	0.00000000	0.00000000	0.00000000
0.50	0.25000000	0.50000000	0.25000000	0.00000000	0.00000000	0.00000000	0.00000000
0.75	0.06250000	0.37500000	0.56250000	0.00000000	0.00000000	0.00000000	0.00000000
1.00	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000
1.25	0.00000000	0.00000000	0.76562500	0.22395833	0.01041667	0.00000000	0.00000000
1.50	0.00000000	0.00000000	0.56250000	0.39583333	0.04166667	0.00000000	0.00000000
1.75	0.00000000	0.00000000	0.39062500	0.51562500	0.09375000	0.00000000	0.00000000
2.00	0.00000000	0.00000000	0.25000000	0.58333333	0.16666667	0.00000000	0.00000000
2.25	0.00000000	0.00000000	0.14062500	0.59895833	0.26041667	0.00000000	0.00000000
2.50	0.00000000	0.00000000	0.06250000	0.56250000	0.37500000	0.00000000	0.00000000
2.75	0.00000000	0.00000000	0.01562500	0.47395833	0.51041667	0.00000000	0.00000000
3.00	0.00000000	0.00000000	0.00000000	0.33333333	0.66666667	0.00000000	0.00000000
3.25	0.00000000	0.00000000	0.00000000	0.18750000	0.79166667	0.02083333	0.00000000
3.50	0.00000000	0.00000000	0.00000000	0.08333333	0.83333333	0.08333333	0.00000000
3.75	0.00000000	0.00000000	0.00000000	0.02083333	0.79166667	0.18750000	0.00000000
4.00	0.00000000	0.00000000	0.00000000	0.00000000	0.66666667	0.33333333	0.00000000
4.25	0.00000000	0.00000000	0.00000000	0.00000000	0.51041667	0.47395833	0.01562500
4.50	0.00000000	0.00000000	0.00000000	0.00000000	0.37500000	0.56250000	0.06250000
4.75	0.00000000	0.00000000	0.00000000	0.00000000	0.26041667	0.59895833	0.14062500
5.00	0.00000000	0.00000000	0.00000000	0.00000000	0.16666667	0.58333333	0.25000000
5.25	0.00000000	0.00000000	0.00000000	0.00000000	0.09375000	0.51562500	0.39062500
5.50	0.00000000	0.00000000	0.00000000	0.00000000	0.04166667	0.39583333	0.56250000
5.75	0.00000000	0.00000000	0.00000000	0.00000000	0.01041667	0.22395833	0.76562500
6.00	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000

AVALIACAO DA (J-1)-ESIMA DERIVADA DO SPLINE S EM X

X	J	BSDJX	BSDX	BSDX2	RPPDX
1.0	1	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
1.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
1.0	3	0.	0.	0.	0.
1.5	1	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
1.5	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
1.5	3	0.	0.	0.	0.
2.0	1	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
2.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
2.0	3	0.	0.	0.	0.
2.5	1	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
2.5	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
2.5	3	0.	0.	0.	0.
3.0	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
3.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
3.0	3	0.	0.	0.	0.
3.5	1	6.0000E+00	6.0000E+00	6.0000E+00	6.0000E+00
3.5	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
3.5	3	0.	0.	0.	0.
4.0	1	7.0000E+00	7.0000E+00	7.0000E+00	7.0000E+00
4.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
4.0	3	0.	0.	0.	0.
4.5	1	8.0000E+00	8.0000E+00	8.0000E+00	8.0000E+00
4.5	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
4.5	3	0.	0.	0.	0.
5.0	1	9.0000E+00	9.0000E+00	9.0000E+00	9.0000E+00
5.0	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
5.0	3	0.	0.	0.	0.
5.5	1	8.0000E+00	8.0000E+00	8.0000E+00	8.0000E+00
5.5	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
5.5	3	0.	0.	0.	0.
6.0	1	7.0000E+00	7.0000E+00	7.0000E+00	7.0000E+00
6.0	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
6.0	3	0.	0.	0.	0.

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TESTE DOS PROCEDIMENTOS BSDJX,BSDX,BSDX2 E RPPDX

UTILIZA BSRPP-BSMCD-INTERV-LBISEC-BSMQ-INVPTE
POLINOMIOS DE ORDEM M= 3 B-SPLINES LINEARMENTE INDEPENDENTES, N= 15

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Y(I)	1.0	1.0	1.0	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.0	4.0	5.0	5.0	5.0	6.0	6.0	6.0
C(I)	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0			

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)
0	3.00	2.00	0.00
1	4.00	2.00	0.00
2	7.00	2.00	0.00
3	8.00	-2.00	0.00
4	5.00	-2.00	0.00

PARTICAO SIMPLES E VETOR DE MULTIPLICIDADE

EXTREMOS DO INTERVALO A= 1.0 B= 6.0

K	1	2	3	4
X(K)	2.0	3.0	4.0	5.0
L(K)	3	3	3	3

AVALIACAO DA (J-1)-ESIMA DERIVADA DO SPLINE S EM X

X	J	BSDJX	BSDX	BSDX2	APPDX
1.0	1	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
1.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
1.0	3	0.	0.	0.	0.
1.5	1	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
1.5	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
1.5	3	0.	0.	0.	0.
2.0	1	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
2.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
2.0	3	0.	0.	0.	0.
2.5	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
2.5	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
2.5	3	0.	0.	0.	0.
3.0	1	7.0000E+00	7.0000E+00	7.0000E+00	7.0000E+00
3.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
3.0	3	0.	0.	0.	0.
3.5	1	8.0000E+00	8.0000E+00	8.0000E+00	8.0000E+00
3.5	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
3.5	3	0.	0.	0.	0.
4.0	1	8.0000E+00	8.0000E+00	8.0000E+00	8.0000E+00
4.0	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
4.0	3	0.	0.	0.	0.
4.5	1	7.0000E+00	7.0000E+00	7.0000E+00	7.0000E+00
4.5	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
4.5	3	0.	0.	0.	0.
5.0	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
5.0	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
5.0	3	0.	0.	0.	0.
5.5	1	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
5.5	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
5.5	3	0.	0.	0.	0.
6.0	1	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
6.0	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
6.0	3	0.	0.	0.	0.

TESTE DOS PROCEDIMENTOS BSDJX,BSDX,BSDX2 E RPPDX

UTILIZA BSRPP-BSMCD-INTERV-LBISEC-BSMQ-INVPTE
POLINOMIOS DE ORDEM M= 3 B-SPLINES LINEARMENTE INDEPENDENTES, N= 15

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Y(I)	1.0	1.0	1.0	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.0	4.0	5.0	5.0	5.0	6.0	6.0	6.0
C(I)	1.0	2.0	4.0	5.0	6.0	3.0	7.0	8.0	9.0	5.0	4.0	3.0	2.0	1.0	5.0			

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)
0	4.00	4.00	1.00
1	5.00	2.00	-4.00
2	7.00	2.00	0.00
3	5.00	-2.00	0.00
4	2.00	-2.00	5.00

PARTICAO SIMPLES E VETOR DE MULTIPLICIDADE

EXTREMOS DO INTERVALO A= 1.0 B= 6.0

K	1	2	3	4
X(K)	2.0	3.0	4.0	5.0
L(K)	3	3	3	3

AVALIACAO DA (J-1)-ESIMA DERIVADA DO SPLINE S EM X

X	J	BSDJX	BSDX	BSDX2	BFFDX
1.0	1	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
1.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
1.0	3	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
1.5	1	2.2500E+00	2.2500E+00	2.2500E+00	2.2500E+00
1.5	2	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
1.5	3	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
2.0	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
2.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
2.0	3	-8.0000E+00	-8.0000E+00	-8.0000E+00	-8.0000E+00
2.5	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
2.5	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
2.5	3	-8.0000E+00	-8.0000E+00	-8.0000E+00	-8.0000E+00
3.0	1	7.0000E+00	7.0000E+00	7.0000E+00	7.0000E+00
3.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
3.0	3	0.	0.	0.	0.
3.5	1	8.0000E+00	8.0000E+00	8.0000E+00	8.0000E+00
3.5	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
3.5	3	0.	0.	0.	0.
4.0	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
4.0	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
4.0	3	0.	0.	0.	0.
4.5	1	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
4.5	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
4.5	3	0.	0.	0.	0.
5.0	1	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
5.0	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
5.0	3	1.0000E+01	1.0000E+01	1.0000E+01	1.0000E+01
5.5	1	2.2500E+00	2.2500E+00	2.2500E+00	2.2500E+00
5.5	2	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
5.5	3	1.0000E+01	1.0000E+01	1.0000E+01	1.0000E+01
6.0	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
6.0	2	8.0000E+00	8.0000E+00	8.0000E+00	8.0000E+00
6.0	3	1.0000E+01	1.0000E+01	1.0000E+01	1.0000E+01

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TESTE DOS PROCEDIMENTOS BSDJX, BSDX, BSDX2 E BPPDX

UTILIZA BSRPP-ESMCD-INTERV-LBISEC-BSMQ-INVPTE
POLINOMIOS DE ORDEM M= 3 B-SPLINES LINEARMENTE INDEPENDENTES, N= 7

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10
Y(I)	1.0	1.0	1.0	2.0	3.0	4.0	5.0	6.0	6.0	6.0
C(I)	1.0	2.0	3.0	4.0	5.0	6.0	7.0			

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)
0	2.50	1.00	-0.50
1	2.50	1.00	0.00
2	3.50	1.00	0.00
3	4.50	1.00	0.00
4	5.50	1.00	0.50

PARTICAO SIMPLES E VETOR DE MULTIPLICIDADE

EXTREMOS DO INTERVALO A= 1.0 B= 6.0

K	1	2	3	4
X(K)	2.0	3.0	4.0	5.0
L(K)	1	1	1	1

AVALIACAO DA (J-1)-ESIMA DERIVADA DO SPLINE S EM X

X	J	BSDJX	BSDX	BSDX2	BFDX
1.0	1	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
1.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
1.0	3	-1.0000E+00	-1.0000E+00	-1.0000E+00	-1.0000E+00
1.5	1	1.8750E+00	1.8750E+00	1.8750E+00	1.8750E+00
1.5	2	1.5000E+00	1.5000E+00	1.5000E+00	1.5000E+00
1.5	3	-1.0000E+00	-1.0000E+00	-1.0000E+00	-1.0000E+00
2.0	1	2.5000E+00	2.5000E+00	2.5000E+00	2.5000E+00
2.0	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
2.0	3	0.	0.	0.	0.
2.5	1	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
2.5	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
2.5	3	0.	0.	0.	0.
3.0	1	3.5000E+00	3.5000E+00	3.5000E+00	3.5000E+00
3.0	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
3.0	3	0.	0.	0.	0.
3.5	1	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
3.5	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
3.5	3	0.	0.	0.	0.
4.0	1	4.5000E+00	4.5000E+00	4.5000E+00	4.5000E+00
4.0	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
4.0	3	0.	0.	0.	0.
4.5	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
4.5	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
4.5	3	0.	0.	0.	0.
5.0	1	5.5000E+00	5.5000E+00	5.5000E+00	5.5000E+00
5.0	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
5.0	3	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
5.5	1	6.1250E+00	6.1250E+00	6.1250E+00	6.1250E+00
5.5	2	1.5000E+00	1.5000E+00	1.5000E+00	1.5000E+00
5.5	3	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
6.0	1	7.0000E+00	7.0000E+00	7.0000E+00	7.0000E+00
6.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
6.0	3	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00

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TESTE DOS PROCEDIMENTOS BSDJX,BSDX,BSDX2 E RPPDX

UTILIZA BSRPP-BSMCD-INTERV-LBISEC-BSMQ-INVPTE
POLINOMIOS DE ORDEM M=  3   B-SPLINES LINEARMENTE INDEPENDENTES, N=  7


PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

  I    1    2    3    4    5    6    7    8    9   10

Y(I) 1.0  1.0  1.0  2.0  3.0  4.0  5.0  6.0  6.0  6.0
C(I) 1.0  3.0  5.0  6.0  7.0  5.0  4.0


COEFICIENTES DOS POLINOMIOS POR PARTES

 K     C(0)    C(1)    C(2)

 0     4.00    2.00   -1.00
 1     4.00    2.00   -0.50
 2     5.50    1.00    0.00
 3     6.50    1.00   -1.50
 4     6.00   -2.00    0.00


PARTICAO SIMPLES E VETOR DE MULTIPLICIDADE

EXTREMOS DO INTERVALO  A= 1.0  B= 6.0

  K    1    2    3    4

X(K) 2.0  3.0  4.0  5.0
L(K)  1    1    1    1
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AVALIACAO DA (J-1)-ESIMA DERIVADA DO SPLINE S EM X

X	J	BSDJX	BSDX	BSDX2	BPPDX
1.0	1	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
1.0	2	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
1.0	3	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
1.5	1	2.7500E+00	2.7500E+00	2.7500E+00	2.7500E+00
1.5	2	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
1.5	3	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
2.0	1	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
2.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
2.0	3	-1.0000E+00	-1.0000E+00	-1.0000E+00	-1.0000E+00
2.5	1	4.8750E+00	4.8750E+00	4.8750E+00	4.8750E+00
2.5	2	1.5000E+00	1.5000E+00	1.5000E+00	1.5000E+00
2.5	3	-1.0000E+00	-1.0000E+00	-1.0000E+00	-1.0000E+00
3.0	1	5.5000E+00	5.5000E+00	5.5000E+00	5.5000E+00
3.0	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
3.0	3	0.	0.	0.	0.
3.5	1	6.0000E+00	6.0000E+00	6.0000E+00	6.0000E+00
3.5	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
3.5	3	0.	0.	0.	0.
4.0	1	6.5000E+00	6.5000E+00	6.5000E+00	6.5000E+00
4.0	2	1.0000E+00	1.0000E+00	1.0000E+00	1.0000E+00
4.0	3	-3.0000E+00	-3.0000E+00	-3.0000E+00	-3.0000E+00
4.5	1	6.6250E+00	6.6250E+00	6.6250E+00	6.6250E+00
4.5	2	-5.0000E-01	-5.0000E-01	-5.0000E-01	-5.0000E-01
4.5	3	-3.0000E+00	-3.0000E+00	-3.0000E+00	-3.0000E+00
5.0	1	6.0000E+00	6.0000E+00	6.0000E+00	6.0000E+00
5.0	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
5.0	3	0.	0.	0.	0.
5.5	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
5.5	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
5.5	3	0.	0.	0.	0.
6.0	1	4.0000E+00	4.0000E+00	4.0000E+00	4.0000E+00
6.0	2	-2.0000E+00	-2.0000E+00	-2.0000E+00	-2.0000E+00
6.0	3	0.	0.	0.	0.

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TESTE DOS PROCEDIMENTOS BSDJx,BSDX,BSDx2 E RPPDX

UTILIZA BSRPP-BSMCD-INTERV-LBISEC-BSMC-INVPTE
POLINOMIOS DE ORDEM M=  4   B-SPLINES LINEARMENTE INDEPENDENTES, N= 12


PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

  I    1    2    3    4    5    6    7    8    9   10   11   12   13   14   15   16

Y(I) 0.0  0.0  0.0  0.0  2.0  2.0  3.0  3.0  3.0  5.0  6.0  6.0  9.0  9.0  9.0  9.0
C(I) 3.0  5.0  1.0  4.0  7.0  6.0  3.0  5.0  7.0  8.0  9.0  5.0


COEFICIENTES DOS POLINOMIOS POR PARTES

 K     C(0)    C(1)    C(2)    C(3)

 0     3.00    3.00    4.50    1.50
 1     3.00    3.00    6.00   -6.00
 2     6.00   -4.50    3.25   -0.54
 3     5.67    2.00    0.00   -0.42
 4     7.25    0.75    0.08   -0.19


PARTICAO SIMPLES E VETOR DE MULTIPLICIDADE

EXTREMOS DO INTERVALO  A= 0.0  B= 9.0

  K    1    2    3    4

X(K) 2.0  3.0  5.0  6.0
L(K)  2    3    1    2
```

AVALIACAO DA (J-1)-ESIMA DERIVADA DO SPLINE S EM X

X	J	BSDJX	BSDX	BSDX2	REPDX
0.0	1	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
0.0	2	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
0.0	3	-9.0000E+00	-9.0000E+00	-9.0000E+00	-9.0000E+00
0.0	4	9.0000E+00	9.0000E+00	9.0000E+00	9.0000E+00
0.5	1	3.5625E+00	3.5625E+00	3.5625E+00	3.5625E+00
0.5	2	-3.7500E-01	-3.7500E-01	-3.7500E-01	-3.7500E-01
0.5	3	-4.5000E+00	-4.5000E+00	-4.5000E+00	-4.5000E+00
0.5	4	9.0000E+00	9.0000E+00	9.0000E+00	9.0000E+00
1.0	1	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
1.0	2	-1.5000E+00	-1.5000E+00	-1.5000E+00	-1.5000E+00
1.0	3	0.	0.	0.	0.
1.0	4	9.0000E+00	9.0000E+00	9.0000E+00	9.0000E+00
1.5	1	2.4375E+00	2.4375E+00	2.4375E+00	2.4375E+00
1.5	2	-3.7500E-01	-3.7500E-01	-3.7500E-01	-3.7500E-01
1.5	3	4.5000E+00	4.5000E+00	4.5000E+00	4.5000E+00
1.5	4	9.0000E+00	9.0000E+00	9.0000E+00	9.0000E+00
2.0	1	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
2.0	2	3.0000E+00	3.0000E+00	3.0000E+00	3.0000E+00
2.0	3	1.2000E+01	1.2000E+01	1.2000E+01	1.2000E+01
2.0	4	-3.6000E+01	-3.6000E+01	-3.6000E+01	-3.6000E+01
2.5	1	5.2500E+00	5.2500E+00	5.2500E+00	5.2500E+00
2.5	2	4.5000E+00	4.5000E+00	4.5000E+00	4.5000E+00
2.5	3	-6.0000E+00	-6.0000E+00	-6.0000E+00	-6.0000E+00
2.5	4	-3.6000E+01	-3.6000E+01	-3.6000E+01	-3.6000E+01
3.0	1	6.0000E+00	6.0000E+00	6.0000E+00	6.0000E+00
3.0	2	-4.5000E+00	-4.5000E+00	-4.5000E+00	-4.5000E+00
3.0	3	6.5000E+00	6.5000E+00	6.5000E+00	6.5000E+00
3.0	4	-3.2500E+00	-3.2500E+00	-3.2500E+00	-3.2500E+00
3.5	1	4.4948E+00	4.4948E+00	4.4948E+00	4.4948E+00
3.5	2	-1.6563E+00	-1.6563E+00	-1.6563E+00	-1.6562E+00
3.5	3	4.8750E+00	4.8750E+00	4.8750E+00	4.8750E+00
3.5	4	-3.2500E+00	-3.2500E+00	-3.2500E+00	-3.2500E+00
4.0	1	4.2083E+00	4.2083E+00	4.2083E+00	4.2083E+00
4.0	2	3.7500E-01	3.7500E-01	3.7500E-01	3.7500E-01
4.0	3	3.2500E+00	3.2500E+00	3.2500E+00	3.2500E+00
4.0	4	-3.2500E+00	-3.2500E+00	-3.2500E+00	-3.2500E+00
4.5	1	4.7344E+00	4.7344E+00	4.7344E+00	4.7344E+00
4.5	2	1.5937E+00	1.5937E+00	1.5937E+00	1.5937E+00
4.5	3	1.6250E+00	1.6250E+00	1.6250E+00	1.6250E+00
4.5	4	-3.2500E+00	-3.2500E+00	-3.2500E+00	-3.2500E+00
5.0	1	5.6667E+00	5.6667E+00	5.6667E+00	5.6667E+00
5.0	2	2.0000E+00	2.0000E+00	2.0000E+00	2.0000E+00
5.0	3	0.	0.	0.	0.

5.0	4	-2.5000E+00	-2.5000E+00	-2.5000E+00	-2.5000E+00
5.5	1	6.6146E+00	6.6146E+00	6.6146E+00	6.6146E+00
5.5	2	1.6875E+00	1.6875E+00	1.6875E+00	1.6875E+00
5.5	3	-1.2500E+00	-1.2500E+00	-1.2500E+00	-1.2500E+00
5.5	4	-2.5000E+00	-2.5000E+00	-2.5000E+00	-2.5000E+00
6.0	1	7.2500E+00	7.2500E+00	7.2500E+00	7.2500E+00
6.0	2	7.5000E-01	7.5000E-01	7.5000E-01	7.5000E-01
6.0	3	1.6667E-01	1.6667E-01	1.6667E-01	1.6667E-01
6.0	4	-1.1667E+00	-1.1667E+00	-1.1667E+00	-1.1667E+00
6.5	1	7.6215E+00	7.6215E+00	7.6215E+00	7.6215E+00
6.5	2	6.8750E-01	6.8750E-01	6.8750E-01	6.8750E-01
6.5	3	-4.1667E-01	-4.1667E-01	-4.1667E-01	-4.1667E-01
6.5	4	-1.1667E+00	-1.1667E+00	-1.1667E+00	-1.1667E+00
7.0	1	7.8889E+00	7.8889E+00	7.8889E+00	7.8889E+00
7.0	2	3.3333E-01	3.3333E-01	3.3333E-01	3.3333E-01
7.0	3	-1.0000E+00	-1.0000E+00	-1.0000E+00	-1.0000E+00
7.0	4	-1.1667E+00	-1.1667E+00	-1.1667E+00	-1.1667E+00
7.5	1	7.9063E+00	7.9063E+00	7.9063E+00	7.9063E+00
7.5	2	-3.1250E-01	-3.1250E-01	-3.1250E-01	-3.1250E-01
7.5	3	-1.5833E+00	-1.5833E+00	-1.5833E+00	-1.5833E+00
7.5	4	-1.1667E+00	-1.1667E+00	-1.1667E+00	-1.1667E+00
8.0	1	7.5278E+00	7.5278E+00	7.5278E+00	7.5278E+00
8.0	2	-1.2500E+00	-1.2500E+00	-1.2500E+00	-1.2500E+00
8.0	3	-2.1667E+00	-2.1667E+00	-2.1667E+00	-2.1667E+00
8.0	4	-1.1667E+00	-1.1667E+00	-1.1667E+00	-1.1667E+00
8.5	1	6.6076E+00	6.6076E+00	6.6076E+00	6.6076E+00
8.5	2	-2.4792E+00	-2.4792E+00	-2.4792E+00	-2.4792E+00
8.5	3	-2.7500E+00	-2.7500E+00	-2.7500E+00	-2.7500E+00
8.5	4	-1.1667E+00	-1.1667E+00	-1.1667E+00	-1.1667E+00
9.0	1	5.0000E+00	5.0000E+00	5.0000E+00	5.0000E+00
9.0	2	-4.0000E+00	-4.0000E+00	-4.0000E+00	-4.0000E+00
9.0	3	-3.3333E+00	-3.3333E+00	-3.3333E+00	-3.3333E+00
9.0	4	-1.1667E+00	-1.1667E+00	-1.1667E+00	-1.1667E+00

TESTE DOS PROCEDIMENTOS BSXH, BSX2H E BSRPPH

UTILIZA BSX,BSMQ,RPPSX,INTERV,LBISEQ,PTE E BSMQH

ENTRADA:PARTICAO UNIFORME DEFINIDA POR A,B,K,M

PONTOS DO INTERVALO (A,B)

COEF. DA EXPANSAO EM B-SPLINES

POLINOMIOS DE ORDEM M= 4

NUMERO DE NOS DA PARTICAO UNIFORME K= 3

EXTREMOS DO INTERVALO- A= 0.0 , B= 8.0

SPLINES LINEARMENTE INDEPENDENTES, N= 7

PARTICAO ESTENDIDA E COEFICIENTES DA EXPANSAO EM B-SPLINES

I	1	2	3	4	5	6	7	8	9	10	11
T(I)	-6.0	-4.0	-2.0	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0
C(I)	1.0	3.0	1.0	5.0	2.0	7.0	9.0				

COEFICIENTES DOS POLINOMIOS POR PARTES

K	C(0)	C(1)	C(2)	C(3)
0	2.00	0.50	0.75	0.21
1	2.00	0.50	0.75	-0.27
2	3.83	0.25	-0.88	0.31
3	3.33	0.50	1.00	-0.23

X	BSX	BSXH	BSX2H	RPPSX
0.00	2.33333333E+00	2.33333333E+00	2.33333333E+00	2.33333333E+00
0.50	2.23437500E+00	2.23437500E+00	2.23437500E+00	2.23437500E+00
1.00	2.04166667E+00	2.04166667E+00	2.04166667E+00	2.04166667E+00
1.50	1.91145833E+00	1.91145833E+00	1.91145833E+00	1.91145833E+00
2.00	2.00000000E+00	2.00000000E+00	2.00000000E+00	2.00000000E+00
2.50	2.40364583E+00	2.40364583E+00	2.40364583E+00	2.40364583E+00
3.00	2.97916667E+00	2.97916667E+00	2.97916667E+00	2.97916667E+00
3.50	3.52343750E+00	3.52343750E+00	3.52343750E+00	3.52343750E+00
4.00	3.83333333E+00	3.83333333E+00	3.83333333E+00	3.83333333E+00
4.50	3.77864583E+00	3.77864583E+00	3.77864583E+00	3.77864583E+00
5.00	3.52083333E+00	3.52083333E+00	3.52083333E+00	3.52083333E+00
5.50	3.29427083E+00	3.29427083E+00	3.29427083E+00	3.29427083E+00
6.00	3.33333333E+00	3.33333333E+00	3.33333333E+00	3.33333333E+00
6.50	3.80468750E+00	3.80468750E+00	3.80468750E+00	3.80468750E+00
7.00	4.60416667E+00	4.60416667E+00	4.60416667E+00	4.60416667E+00
7.50	5.55989583E+00	5.55989583E+00	5.55989583E+00	5.55989583E+00

8.00 6.50000000E+00 6.50000000E+00 6.50000000E+00 6.50000000E+00

CALCULO DO PRODUTO INTERNO G(5,5)=(N5,N5)
SOBRE OS NOS 5,6,6+10**(-R),8,9 PARA R=0,1,...,9

Y(7)	(N5,N5)
7.0000000000	0.47936507937
6.1000000000	0.46474259840
6.0100000000	0.46172681642
6.0010000000	0.46141091899
6.0001000000	0.46137918856
6.0000100000	0.46137601412
6.0000010000	0.46137569666
6.0000001000	0.46137566491
6.0000000100	0.46137566174
6.0000000010	0.46137566141

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