


```

ANALYTC      PROGRAM ANALYTC(INPUT,OUTPUT)
              DIMENSION T(11,11)
              PI = 3.141592659
4             PI2 = PI/2.
5             PSC = PI**2/4.
7             SP = 16./PI**2
10            CX = .1
12            DY = .1
13            10 READ 20,TIME
              20 FCFRMT(E10.3)
21            IF(TIME.LT.1.E-11)STCF
26            DC 40 IX = 1,11
30            DC 30 IY = 1,11
40            T(IX,IY) = 1.
42            30 CONTINUE
44            40 CCNTINUE
45            DO 110 IX = 1,10
46            X = (IX-1)*CX +.05
51            DC 100 IY = 1,10
53            Y = (IY-1)*DY + .05
60            TPREV = 1.
61            NF = 1
62            JF = 1
64            50 NL = NF + 4
66            JL = JF + 4
70            DO 70 J = JF,JL
71            J2 = 2*J - 1
72            CJ = -SP*(-1)**(J+1)/J2
102           CCSJ = COS(J2*PI2*Y)
107           EXJ = EXP(-J2**2*PSC*TIME)
117           TERMJ = CJ*CCSJ*EXJ
122           DC 60 N = NF,NL
124           N2 = 2*N-1
125           T(IX,IY)=T(IX,IY)+TERMJ/N2*(-1)**(N+1)*COS(N2*PI2*X)*EXP(-N2**2
              $*PSC*TIME)
157           60 CONTINUE
162           70 CONTINUE
167           ABT = ABS(T(IX,IY)-TPREV)
172           TPREV = T(IX,IY)
172           IF(ABT.LT..0001)GO TO 100
175           IF(NL.LT.100.CR.JL.LT.100)GO TO 80
204           PRINT 80,X,Y,ABT
              80 FORMAT (23H DID NOT CONVERGE AT X=,F5.1,4H ,Y=,F5.1,15H,WHERE ERRO
              $R IS,E12.4)
215           GO TO 100
216           90 NF = NF+5
220           JF = JF + 5
221           GO TO 50
221           100 CONTINUE
223           110 CCNTINUE
225           PRINT 120,TIME
              120 FORMAT (//////28X,21HTEMPERATURES AT TIME=,F7.3//)
233           DC 140 IY=1,11
235           PRINT 130,(T(IX,IY),IX=1,11)
              130 FORMAT(11F8.3)
244           140 CONTINUE

```

```

ANALYTC      GC TO 10
246           END
247

```

PROGRAM LENGTH INCLUDING I/O BUFFERS

C1632

STATEMENT FUNCTION REFERENCES

LOCATION	GEN TAG	SYM TAG	REFERENCES
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STATEMENT NUMBER REFERENCES

LOCATION	GEN TAG	SYM TAG	REFERENCES
000014	L00011	10	000247
000266	C00014	20	000014
000065	L00046	50	000221
000276	C00024	80	000204
000217	L00111	90	000204
000222	L00114	100	000175 CCC216
000307	C00035	120	000226
000315	C00043	130	000225

BLOCK NAMES AND LENGTHS

VARIABLE REFERENCES

LOCATION	GEN TAG	SYM TAG	REFERENCES
000563	V00032	ABT	000172 000213
000555	V00024	CJ	000102 000120
000556	V00025	CCSJ	000111 000120
000537	V00006	CX	000012 000047
000540	V00007	CY	000013 000056
000557	V00026	EXJ	000121
000542	V00011	IX	000030 000031 000042 000045 000144 000165
000543	V00012	IY	000031 000053 000145 000166 000222 000235
000553	V00022	J	000071 000162
000550	V00017	JF	000064 000066 000220
000552	V00021	JL	000070 000163 000200
000554	V00023	J2	000073 000100 000110
000561	V00030	N	000124 000142 000160
000547	V00016	NF	000063 000065 000123 CCC217
000551	V00020	NL	000067 000160 000175
000562	V00031	N2	000126 000135 000152
000533	V00002	PI	000003
000534	V00003	PI2	000006 000103 000136
000535	V00004	PSC	000010 000113 000130
000536	V00005	SP	000012 000077
000342	G00001	T	000036 000170
000560	V00027	TERMJ	000122 000152
000541	V00010	TIME	000017 000022 CCC113 000131 000231
000546	V00015	TPREV	000062 000170