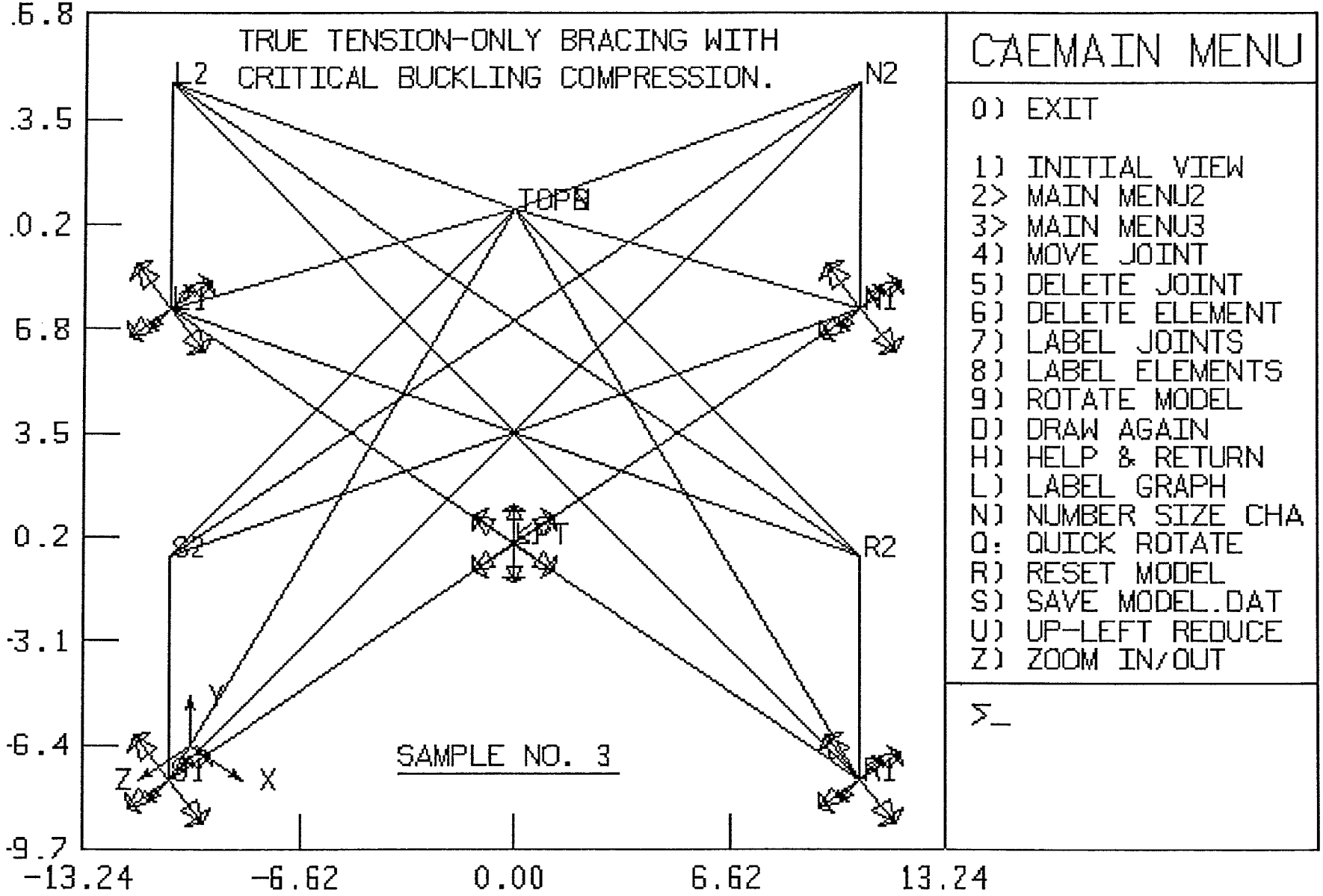

CAEMAIN MENU

0) EXIT

1) INITIAL VIEW
2> MAIN MENU2
3> MAIN MENU3
4) MOVE JOINT
5) DELETE JOINT
6) DELETE ELEMENT
7) LABEL JOINTS
8) LABEL ELEMENTS
9) ROTATE MODEL
D) DRAW AGAIN
H) HELP & RETURN
L) LABEL GRAPH
N) NUMBER SIZE CHA
Q: QUICK ROTATE
R) RESET MODEL
S) SAVE MODEL.DAT
U) UP-LEFT REDUCE
Z) ZOOM IN/OUT

>_

```
$ MODEL.DATA
$ POWERFUL EXAMPLE OF NON-LINEAR ANALTYSYS:
$ ONE SET OF INPUT WITH ONE SET OF OUTPUT IN ONE RUN FOR FINAL RESULTS
$ TO OBTAIN UNLIMITED NUMBER OF LOAD CASES INCLUDING CORRECT NON-LINEAR
$ EFFECT OF LOAD COMBINATIONS.
$ OTHER COMPETITOR'S PROGRAM NEXT IN LINE IN CAPABILITY IS TO MANUALLY
$ INPUT, MANUALLY STUDY RESULTS IN SEQUENCES WITH 100 SETS OF INPUT AND
$ 100 SETS OF OUTPUTS OR MORE.
$ IT IS A SMALL JOB HERE FOR  USP  VS OTHERS, A BIG PROJECT BEYOND
$ ECONOMIC ALLOWABLE.
$
$ 3-D GABLE  HINGED  STRUCTURE WITH GEOMETRICAL AND LOADING SYMMETRY
$ THE OUTPUT IS CONSISTENT IN THE FORM OF 4 OF A KIND OR A PAIR
$ THUS IT CAN BE VISUALLY AND QUICKLY VERIFIED AS A ROUGH CHECK.
$
$ CAEINC. WARRANTS THAT PROGRAM SHALL PERFORM SUBTANTIALLY IN COMPLIANCE
$ WITH SPECIFICATIONS.  HERE IS A SMALL TIP ON HOW YOU CAN VERIFY IT.
$
$ THOUGH, THE EXAMPLE CONTAINS POWERFUL NON-LINEAR THEORY, OBLIQUE COOR-
$ NATE AND SUPPORT MOVEMENTS.
$ MANUALLY, THE RESULT CAN BE CHECKED FOR STATICAL EQUILIBRIUM AND
$ COMPATABILITY IN STRAIN VS STRESS RELATIONSHIP.
$ A SOPHOREMORE IN ENGINNERING WITH UNDERSTANDING OF STATICS AND
$ STRENGTH OF MATERIAL CAN CHECK IT.
$   COMPLETE    INPUT AND OUTPUT ARE PROVIDED FOR YOUR CHECK.
$ A TEST POLIT, WHO DOES NOT HAVE TO POSSESS THE TECHNOLOGICAL
$ CAPABILITY OF THE PLANE MANUFACTURER AND WHO, IF SUPPLIED WITH A REAL
$  COMPLETE  AIR PLANE CAN VERIFY THE PLANE'S CAPABILITY.
$ ASK OUR COMPETITOR TO SUPPLY YOU WITH   COMPLETE   INPUT AND OUTPUT.
$ DO NOT ACCEPT IMCOMPLETE INPUT AND OUTPUT WITH " AS IS " WARRANTY.
$ CHARGE THE SUPPLY WITH FRAUD AND DECEPTION IF YOU ARE CHEATED EVEN THE
$ SUPPLIER SAYS IT WILL NOT ACCEPT RESPONSIBILITY FOR MISREPRESENTATION
$ THAT IS LIKELY TO TURN OUT TO BE THE TIP OF ICEBURG OF ALL KINDS OF
$ MISREPRESENTATIONS.
$
  UNIT CONVERSION FACTOR 12.
$  NODE    X-VALUE   Y-VALUE   Z-VALUE   BOUND. CONDITION
$ ------  -------  -------  -------  ----------------
   KPT                                    S  $ BLANK FOR DEFAULT 0. VALUE
   L1        -15.     0.         0.       -6 2 2 2 1 1 1  $ COMMENT AFTER $ SIGN
   0.5  .86602  0.     -.86602  .5  0.      0.  0.  1.  $ LOCAL JOINT DIRECTION
   0.25  -0.5  -0.75                                     $ JOINT DISPLACEMENTS
   R1         15.     0.         0.       -6 2 2 2 1 1 1
   0.5  .86602  0.     -.86602  .5  0.      0.  0.  1.
   0.25  -0.5  -0.75
   L2        -15.     10.                  $ BLANK IS FOR FREE JOINT
   R2         15.     10.
$  MODELING AN ACTUAL UNIVERSAL JOINT TO SERVE AS A 3-D HINGE WITH COMMON
$  TRANSLATIONAL DISPLACEMENT AND DIFFERENT ROTATIONAL DISPLACEMENTS BY
   MAKING 3 OTHER COINCIDENTAL NODES SLAVE TO 1 MASTER NODE.
   TOPL        0.     15.
   TOPR        0.     15.       0.        6 -3 -3 -3 0 0 0
```

```
   TOPN        0.     15.       0.        6 -3 -3 -3 0 0 0
   TOPS        0.     15.       0.        6 -3 -3 -3 0 0 0
$
   N1          0.      0.     -15.        -6 2 2 2 1 1 1
   0.5  .86602  0.     -.86602  .5  0.      0.  0.  1.
   0.25  -0.5  -0.75
   S1          0.      0.      15.        -6 2 2 2 1 1 1
   0.5  .86602  0.     -.86602  .5  0.      0.  0.  1.
   0.25  -0.5  -0.75
   N2          0.     10.     -15.
   S2          0.     10.      15.
$ CARRIAGE RETURN AS END DATA BELOW

$ CARRIAGE RETURN AS END DATA ABOVE
ELEMENT RBAR
 TOPL TOPR
 TOPL TOPN
 TOPL TOPS
END DATA
ELEMENT BEAM
 L1  L2
 R1  R2
 L2  TOPL
 R2  TOPR
 N1  N2
 S1  S2
 N2  TOPN
 S2  TOPS
END DATA
ELEMENT ONE-WAY
 T  CRI .787 L1 TOPL  0.5
 T  T-C -2.927224 R1 TOPR
 T  CRIT .787 N1 TOPN
 T  T-C -2.927224 S1 TOPS
$ CARRIAGE RETURN AS END DATA BELOW

$ CARRIAGE RETURN AS END DATA ABOVE
ELEMENT TRUSS
    L1  R2  3  1.0  36. 1.  60.
    R1  L2
    N1  S2
    S1 N2
DEACTIVATE
 $ IF YOUR COMPUTER CAN NOT TAKE IT, USE  0. AS PLACE HOLDER
T S-LF 0.00 L1 R1 0. 0. 0. 0. 0. 1. 1.
DEAC          $ REDUNDANT DEACtivate  CAN BE PRESENT WITHOUT ANY EFFECT.
REACTIVATE
T  S-LF  -0.00  L1 R1 , , , , , , , 1., 1.
T  FS-L   0.005 N1 S1
  L2 R2 , , , , , , , -1., -1.
  N2 S2
  N2 S2 0. 0. 0. 0. 0. -1. -1.
$ CARRIAGE RETURN AS END DATA BELOW
```

```
$ CARRIAGE RETURN AS END DATA ABOVE
```

```
$ SECT.DATA FILE
$     SECTION PROPERTIES OF MEMBERS
$         1          2          3          4          5          6          7
$     --------- --------- --------- --------- --------- ------- -------
$     I D  NAME    AREA       IY         IZ          J        DY       DZ
$
     STELW36X230  67.6       940.      15000.     28.6     35.9     16.47
REPEat 7
     MAT2PIPE2    1.07        .666         .666     1.332    2.     2.
REPEat 3
     STELPIPE6   28.2744
REPEat ALL
END DATA
END DATA
```

```
$ LOAD.DATA FILE
$ 4 LOADING CASES, 3 IDENTICAL CASE RESULTS AS A CHECK.
$ THIS FILE CONTAINS THREE LOADING CONDITONS IDENTICALLY TO SHOW
$ VARIOUS WAY OF INPUT LOADS.
$ EACH LOADING CONDITION SERVE AS A CHECK FOR THE OTHER TWO.
$ LOADING CONDITION CASE 4 TO SHOW
$ POWERFUL LOAD COMBINATION TO OBTAIN CORRECT NON-LINAR COMBINATION
$ UNMATCHED BY THOSE PROGRAMS THAT CAN ONLY DO LINEAR COMBINATION.
$
$ LOADING CONDITION  1
$  BIGD 2
  JOINT LOAD
TOPR    Y  -10000.
END DATA
$ POWERFUL LOAD GENERATION CAPABILITY
$           DIRECTION  MULTIPLICATION FACTOR
SELF LOAD     Y          -3.
END DATA
SELF LOAD     Y          -7.
$ TO GENRATE LOAD FOR EVERY MEMBER IN -Y DIR. AT 10 TIMES OF ITS WEIGHT.
$ ALSO ITS OWN DEAD LOAD
END DATA
 GEN TEMP X  20.
END DATA
 GEN TEMP X  40.
$ TO GENERATE LOAD DUE TO TEMP. INCREASE BY 60 DEGREE FOR EVERY MEMBER.
END DATA
END DATA
$ END DATA
$
$ LOADING CONDITION  2
$ AN IDENTICAL LOADING SITIATION AS LOADING CONDITION 1 BUT IN DIFFERENT
$ FORM AS A CHECK
$ JOIt LOAd
$TOP    Y  -10000.
$END DATA
$ TO VERIFY IT WITH INDIVIDUAL MEMBER LOAD AS A CHECK
 MEMBER LOAD
 L1  L2  KPT
  UNIform   Y                    $ use  UNI  command
$ AREA X WT/UNIT VOLUME X CONVERSION FACTOR = WT/UNIT LENGTH
$ 67.6 X  0.000283566   X       12  =            0.230028739
$ UNIFORM FULL SPAN LOAD
$ WT/UNIT LENGTH  X MULTIPLICATION FACTOR = INPUT LOAD /UNIT LENGTH
$   0.230028739   X  10                    =  2.30028739
$ UNIFORM FULL SPAN LOAD
  U-F   -2.30028739
$ NO 4th LINE IS USED
  TEM   X
  U-F   60
 END DATA
  R1  R2  KPT
```

```
  UNIform    Y
  F-U    -2.30028739
$ NO 4th LINE IS USED
  TEM    X
  U-F    60
  END DATA
 L2  TOPL     KPT
  UNIform    Y                    $ use  UNI  command
  -2.30028739
   FR    0.0          1.0         $ use  FRactional distance
  TEM    X
  U-F    60
  END DATA
 R2  TOPR    KPT
  UNIform    Y                    $ use  UNI  command
  -2.30028739
   FR    0.0          1.0         $ use  FRactional distance
$   AC    0.0          15.8113883          $ use  ACtual distance
  TEM    X
  U-F    60
  END DATA
 N1  N2  KPT
  DIStributed         Y            $ use  DIS  command
  -2.30028739      -2.30028739
   FR    0.0          1.0         $ use  FRactional distance
  TEM    X
  U-F    60
  END DATA
 S1  S2  KPT
  DIStributed         Y            $ use  DIS  command
  -2.30028739      -2.30028739
$  AC    0.0          10.          $ use  ACtual distance
   FR    0.0          1.0         $ use  FRactional distance
  TEM    X
  U-F    60
  END DATA
 N2  TOPN    KPT
$ ACCUMULATIVE WITH LOAD INPUT MORE THAN     ONCE  BELOW
  DIStributed         Y            $ use  DIS  command
  -1.0             -1.0
   FR    0.0          1.0         $ use  FRactional distance
  DIStributed         Y            $ use  DIS  command
  -1.30028739      -1.30028739
   FR    0.0          1.0         $ use  FRactional distance
$ ACCUMULATIVE WITH LOAD INPUT MORE THAN     ONCE  ABOVE
  TEM    X
  U-F    60
  END DATA
 S2  TOPS    KPT
  DIStributed         Y            $ use  DIS  command
  -2.30028739      -2.30028739
   AC    0.0          15.8113883          $ use  ACtual distance
   FR    0.0          1.0         $ use  FRactional distance
```

```
 TEM    X
 U-F    60
END DATA
L1 TOPL
 TEM    X
 U-F    60
 END DATA
R1 TOPR
 TEM    X
 U-F    60
 END DATA
N1 TOPN
 TEM    X
 U-F    60
 END DATA
S1 TOPS
 TEM    X
 U-F    60
 END DATA
L1  R2
 UNIform    Y
 U-F      -0.962115628
 TEM    X
 U-F    60
 END DATA
R1  L2
 UNIform    Y
 U-F      -0.962115628
 TEM    X
 U-F    60
 END DATA
N1  S2
 UNIform    Y
 U-F      -0.962115628
 TEM    X
 U-F    60
 END DATA
S1 N2
 UNIform    Y
 U-F      -0.962115628
 TEM    X
 U-F    60
 END DATA
L1 R1
 UNIform    Y
 U-F      -0.962115628
 TEM    X
 U-F    60
 END DATA
N1 S1
 UNIform    Y
 U-F      -0.962115628
 TEM    X
```

```
 U-F    60
 END DATA
L2 R2
 UNIform    Y
 U-F      -0.962115628
 TEM    X
 U-F    60
 END DATA
N2 S2
 UNIform    Y
 U-F      -0.962115628
 TEM    X
 U-F    60
 END DATA
 JOIt LOAd
TOPR    Y  -10000.
END DATA
END DATA
$ LOAD CASE 3
$ POWERFUL LOAD COMBINATION TO OBTAIN CORRECT NON-LINAR COMBINATION
$ UNMATCHED BY THOSE PROGRAMS THAT CAN ONLY DO LINEAR COMBINATION.
LOAd COMbination
$ LOAD  COMBINATION  LOAD COMBINATION
$ CASE    FACTOR     CASE   FACTOR
$ ----   --------    ----  --------
   1       0.4        2      0.6
END DATA
END DATA
$ LOAD CASE 4
$ POWERFUL LOAD COMBINATION TO OBTAIN CORRECT NON-LINAR COMBINATION
$ UNMATCHED BY THOSE PROGRAMS THAT CAN ONLY DO LINEAR COMBINATION.
LOAd COMbination
$ LOAD  COMBINATION  LOAD COMBINATION
$ CASE    FACTOR     CASE   FACTOR
$ ----   --------    ----  --------
   1       1.4        2      1.6
END DATA
END DATA
END DATA
```

```
$ MAT.DATA FILE
$  I D  NAME        E          G          ALPHA       RHO
$ ----------     -------    -------    ---------  -----------
  CNC1COLUMN       3300.      1240.    0.0000055 0.000086806
  CNC2GIRDER       3300.      1240.    0.0000055 0.000434030
  STEL            29000.     11200.    0.0000065 0.000283565
  MAT2            29000.     11200.    0.0000065 0.000000000
$ THIS PORTION UP IS GOOD
$ END DATA
$ STELPIPE6       29000.     11200.    0.0000065 0.000000000
  STELW24X076     29000.     11200.    0.0000065 0.000283565
  STELWT9X38      29000.     11200.    0.0000065 0.000283565
  STELPIPE2       29000.     11200.    0.0000065 0.000000000
  STELPIPE6       29000.     11200.    0.0000065 0.000283565
  ALUMBEAM        10000.      3750.    0.0000128 0.000095486
  CONCCOLUMN       3300.      1240.    0.0000055 0.000086806
  END DATA
$ FOR PLOT   NO   NON-LINEAR ALLOW BELOW  FOR USP  O K
  NLINMATERAIL    10000.      3750.    0.0000128 0.0000
  NONLCONTINUE    0.01 100.  0.02 100.   0.03  100.
  NONLCONTINUE    0.06 100.  0.2  100.
$ FOR PLOT   NO   NON-LINEAR ALLOW ABOVE  FOR USP  O K
  END DATA
  END DATA
  STELW24X076     29000.     11200.    0.0000065 0.000283565
  STELWT9X38      29000.     11200.    0.0000065 0.000283565
  STELPIPE2       29000.     11200.    0.0000065 0.000000000
  STELPIPE6       29000.     11200.    0.0000065 0.000283565
      NONL        0.01 100.  0.02 130.   0.03  150.
      NONL        0.06 160.  0.2  160.5
```

OUTPUT RESULT

LOADING CONDITION 1

APPLIED NODE FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
1	KPT	0.00	0.00	0.00	0.00	0.00	0.00
2	L1	-1108.60	89.39	0.00	0.00	0.00	0.00
3	R1	-476.88	-1004.77	0.00	0.00	0.00	0.00
4	L2	-1348.48	564.58	0.00	0.00	0.00	-545.56
5	R2	1348.48	564.58	0.00	0.00	0.00	545.56
6	TOPL	733.88	232.15	0.00	0.00	0.00	545.56
7	TOPR	-733.88	-9767.85	0.00	0.00	0.00	-545.56
8	TOPN	0.00	232.15	733.88	-545.56	0.00	0.00
9	TOPS	0.00	232.15	-733.88	545.56	0.00	0.00
10	N1	-792.74	-457.69	-4731.50	0.00	0.00	0.00
11	S1	-792.74	-457.69	4731.50	0.00	0.00	0.00
12	N2	0.00	564.58	-1348.48	545.56	0.00	0.00
13	S2	0.00	564.58	1348.48	-545.56	0.00	0.00

BOUNDARY CONDITIONS

RESTRAINTS (0-FREE : 1-FIXED)

NO	NODE	TX	TY	TZ	RX	RY	RZ
1	KPT	1	1	1	1	1	1
2	L1	2	2	2	1	1	1
3	R1	2	2	2	1	1	1
4	L2	0	0	0	0	0	0
5	R2	0	0	0	0	0	0
6	TOPL	0	0	0	0	0	0
7	TOPR	-3	-3	-3	0	0	0
8	TOPN	-3	-3	-3	0	0	0
9	TOPS	-3	-3	-3	0	0	0
10	N1	2	2	2	1	1	1
11	S1	2	2	2	1	1	1
12	N2	0	0	0	0	0	0
13	S2	0	0	0	0	0	0

LOADING CONDITION 2

APPLIED NODE FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
1	KPT	0.00	0.00	0.00	0.00	0.00	0.00
2	L1	-1108.60	89.39	0.00	0.00	0.00	0.00
3	R1	-476.88	-1004.77	0.00	0.00	0.00	0.00
4	L2	-1348.48	564.58	0.00	0.00	0.00	-545.56
5	R2	1348.48	564.58	0.00	0.00	0.00	545.56
6	TOPL	733.88	232.15	0.00	0.00	0.00	545.56
7	TOPR	-733.88	-9767.85	0.00	0.00	0.00	-545.56
8	TOPN	0.00	232.15	733.88	-545.56	0.00	0.00
9	TOPS	0.00	232.15	-733.88	545.56	0.00	0.00
10	N1	-792.74	-457.69	-4731.50	0.00	0.00	0.00
11	S1	-792.74	-457.69	4731.50	0.00	0.00	0.00
12	N2	0.00	564.58	-1348.48	545.56	0.00	0.00
13	S2	0.00	564.58	1348.48	-545.56	0.00	0.00

BOUNDARY CONDITIONS

RESTRAINTS (0-FREE : 1-FIXED)

NO	NODE	TX	TY	TZ	RX	RY	RZ
1	KPT	1	1	1	1	1	1
2	L1	2	2	2	1	1	1
3	R1	2	2	2	1	1	1
4	L2	0	0	0	0	0	0
5	R2	0	0	0	0	0	0
6	TOPL	0	0	0	0	0	0
7	TOPR	-3	-3	-3	0	0	0
8	TOPN	-3	-3	-3	0	0	0
9	TOPS	-3	-3	-3	0	0	0
10	N1	2	2	2	1	1	1
11	S1	2	2	2	1	1	1
12	N2	0	0	0	0	0	0
13	S2	0	0	0	0	0	0

LOADING CONDITION 3

APPLIED NODE FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
1	KPT	0.00	0.00	0.00	0.00	0.00	0.00
2	L1	-1108.60	89.39	0.00	0.00	0.00	0.00
3	R1	-476.88	-1004.77	0.00	0.00	0.00	0.00
4	L2	-1348.48	564.58	0.00	0.00	0.00	-545.56
5	R2	1348.48	564.58	0.00	0.00	0.00	545.56
6	TOPL	733.88	232.15	0.00	0.00	0.00	545.56
7	TOPR	-733.88	-9767.85	0.00	0.00	0.00	-545.56
8	TOPN	0.00	232.15	733.88	-545.56	0.00	0.00
9	TOPS	0.00	232.15	-733.88	545.56	0.00	0.00
10	N1	-792.74	-457.69	-4731.50	0.00	0.00	0.00
11	S1	-792.74	-457.69	4731.50	0.00	0.00	0.00
12	N2	0.00	564.58	-1348.48	545.56	0.00	0.00
13	S2	0.00	564.58	1348.48	-545.56	0.00	0.00

BOUNDARY CONDITIONS

RESTRAINTS (0-FREE : 1-FIXED)

NO	NODE	TX	TY	TZ	RX	RY	RZ
1	KPT	1	1	1	1	1	1
2	L1	2	2	2	1	1	1
3	R1	2	2	2	1	1	1
4	L2	0	0	0	0	0	0
5	R2	0	0	0	0	0	0
6	TOPL	0	0	0	0	0	0
7	TOPR	-3	-3	-3	0	0	0
8	TOPN	-3	-3	-3	0	0	0
9	TOPS	-3	-3	-3	0	0	0
10	N1	2	2	2	1	1	1
11	S1	2	2	2	1	1	1
12	N2	0	0	0	0	0	0
13	S2	0	0	0	0	0	0

LOADING CONDITION 4

APPLIED NODE FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
1	KPT	0.00	0.00	0.00	0.00	0.00	0.00
2	L1	-3325.79	268.16	0.00	0.00	0.00	0.00
3	R1	-1430.65	-3014.31	0.00	0.00	0.00	0.00
4	L2	-4045.43	1693.73	0.00	0.00	0.00	-1636.68
5	R2	4045.43	1693.73	0.00	0.00	0.00	1636.68
6	TOPL	2201.64	696.44	0.00	0.00	0.00	1636.68
7	TOPR	-2201.64	-29303.56	0.00	0.00	0.00	-1636.68
8	TOPN	0.00	696.44	2201.64	-1636.68	0.00	0.00
9	TOPS	0.00	696.44	-2201.64	1636.68	0.00	0.00
10	N1	-2378.22	-1373.07	-5994.93	0.00	0.00	0.00
11	S1	-2378.22	-1373.07	5994.93	0.00	0.00	0.00
12	N2	0.00	1693.73	-4045.43	1636.68	0.00	0.00
13	S2	0.00	1693.73	4045.43	-1636.68	0.00	0.00

BOUNDARY CONDITIONS

RESTRAINTS (0-FREE : 1-FIXED)

NO	NODE	TX	TY	TZ	RX	RY	RZ
1	KPT	1	1	1	1	1	1
2	L1	2	2	2	1	1	1
3	R1	2	2	2	1	1	1
4	L2	0	0	0	0	0	0
5	R2	0	0	0	0	0	0
6	TOPL	0	0	0	0	0	0
7	TOPR	-3	-3	-3	0	0	0
8	TOPN	-3	-3	-3	0	0	0
9	TOPS	-3	-3	-3	0	0	0
10	N1	2	2	2	1	1	1
11	S1	2	2	2	1	1	1
12	N2	0	0	0	0	0	0
13	S2	0	0	0	0	0	0

OUTPUT RESULT

LOADING CONDITION 1

JOINT COORDINATE SYSTEM

MEMBER FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
4	L1	3505.18	-329.22	0.00	0.00	0.00	-119999.72
4	L2	-2037.72	-2847.98	0.00	0.00	0.00	-124526.64
5	R1	1467.47	3200.20	0.00	0.00	0.00	119999.72
5	R2	2037.72	-2847.98	0.00	0.00	0.00	124526.64
6	L2	5472.54	2534.18	0.00	0.00	0.00	124526.64
6	TOPL	-5472.54	-2497.81	0.00	0.00	0.00	0.00
7	R2	-5472.54	2534.18	0.00	0.00	0.00	-124526.64
7	TOPR	5472.54	-2497.81	0.00	0.00	0.00	0.00
8	N1	2486.33	1435.49	2037.72	59999.86	-103922.16	0.00
8	N2	0.00	-2847.98	-2037.72	124526.64	0.00	0.00
9	S1	2486.33	1435.49	-2037.72	-59999.86	103922.16	0.00
9	S2	0.00	-2847.98	2037.72	-124526.64	0.00	0.00
10	N2	0.00	2534.18	5472.54	-124526.64	0.00	0.00
10	TOPN	0.00	-2497.81	-5472.54	0.00	0.00	0.00
11	S2	0.00	2534.18	-5472.54	124526.64	0.00	0.00
11	TOPS	0.00	-2497.81	5472.54	0.00	0.00	0.00
12	L1	2.99	-0.80	0.00	0.00	0.00	0.00
12	TOPL	-2.19	-2.19	0.00	0.00	0.00	0.00
13	R1	0.80	2.99	0.00	0.00	0.00	0.00
13	TOPR	2.19	-2.19	0.00	0.00	0.00	0.00
14	N1	1.90	1.09	2.19	0.00	0.00	0.00
14	TOPN	0.00	-2.19	-2.19	0.00	0.00	0.00
15	S1	1.90	1.09	-2.19	0.00	0.00	0.00
15	TOPS	0.00	-2.19	2.19	0.00	0.00	0.00
16	L1	-659.13	603.77	0.00	0.00	0.00	0.00
16	R2	852.45	299.36	0.00	0.00	0.00	0.00
17	R1	193.32	-872.71	0.00	0.00	0.00	0.00
17	L2	-852.45	299.36	0.00	0.00	0.00	0.00

18	N1	-232.91	-134.47	-852.45	0.00	0.00	0.00
18	S2	0.00	299.36	852.45	0.00	0.00	0.00
19	S1	-232.91	-134.47	852.45	0.00	0.00	0.00
19	N2	0.00	299.36	-852.45	0.00	0.00	0.00
20	L1	12.50	7.22	0.00	0.00	0.00	0.00
20	R1	12.50	7.22	0.00	0.00	0.00	0.00
21	N1	12.50	7.22	0.00	0.00	0.00	0.00
21	S1	12.50	7.22	0.00	0.00	0.00	0.00
22	L2	-2582.37	14.43	0.00	0.00	0.00	0.00
22	R2	2582.37	14.43	0.00	0.00	0.00	0.00
23	N2	0.00	14.43	-2582.37	0.00	0.00	0.00
23	S2	0.00	14.43	2582.37	0.00	0.00	0.00

LOADING CONDITION 1

JOINT COORDINATE SYSTEM

NODE DISPLACEMENTS

NO	NODE	X-TRAN	Y-TRAN	Z-TRAN	X-ROT	Y-ROT	Z-ROT
1	KPT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	L1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
3	R1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
4	L2	6.05903	-0.53017	-9.00000	0.00000	0.00000	-0.00062
5	R2	7.33321	-0.53017	-9.00000	0.00000	0.00000	0.00062
6	TOPL	6.69612	-4.03993	-9.00000	0.00000	0.00000	-0.02754
7	TOPR	6.69612	-4.03993	-9.00000	0.00000	0.00000	0.02754
8	TOPN	6.69612	-4.03993	-9.00000	0.02754	0.00000	0.00000
9	TOPS	6.69612	-4.03993	-9.00000	-0.02754	0.00000	0.00000
10	N1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
11	S1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
12	N2	6.69612	-0.53017	-9.63709	0.00062	0.00000	0.00000
13	S2	6.69612	-0.53017	-8.36291	-0.00062	0.00000	0.00000

LOADING CONDITION 2

JOINT COORDINATE SYSTEM

MEMBER FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
4	L1	3505.19	-329.22	0.00	0.00	0.00	-119999.72
4	L2	-2037.72	-2847.98	0.00	0.00	0.00	-124526.65
5	R1	1467.47	3200.20	0.00	0.00	0.00	119999.72
5	R2	2037.72	-2847.98	0.00	0.00	0.00	124526.65
6	L2	5472.54	2534.18	0.00	0.00	0.00	124526.65
6	TOPL	-5472.54	-2497.81	0.00	0.00	0.00	0.00
7	R2	-5472.54	2534.18	0.00	0.00	0.00	-124526.65
7	TOPR	5472.54	-2497.81	0.00	0.00	0.00	0.00
8	N1	2486.33	1435.49	2037.72	59999.86	-103922.16	0.00
8	N2	0.00	-2847.98	-2037.72	124526.65	0.00	0.00
9	S1	2486.33	1435.49	-2037.72	-59999.86	103922.16	0.00
9	S2	0.00	-2847.98	2037.72	-124526.65	0.00	0.00
10	N2	0.00	2534.18	5472.54	-124526.65	0.00	0.00
10	TOPN	0.00	-2497.81	-5472.54	0.00	0.00	0.00
11	S2	0.00	2534.18	-5472.54	124526.65	0.00	0.00
11	TOPS	0.00	-2497.81	5472.54	0.00	0.00	0.00
12	L1	2.99	-0.80	0.00	0.00	0.00	0.00
12	TOPL	-2.19	-2.19	0.00	0.00	0.00	0.00
13	R1	0.80	2.99	0.00	0.00	0.00	0.00
13	TOPR	2.19	-2.19	0.00	0.00	0.00	0.00
14	N1	1.90	1.09	2.19	0.00	0.00	0.00
14	TOPN	0.00	-2.19	-2.19	0.00	0.00	0.00
15	S1	1.90	1.09	-2.19	0.00	0.00	0.00
15	TOPS	0.00	-2.19	2.19	0.00	0.00	0.00
16	L1	-659.13	603.77	0.00	0.00	0.00	0.00
16	R2	852.45	299.36	0.00	0.00	0.00	0.00
17	R1	193.32	-872.71	0.00	0.00	0.00	0.00
17	L2	-852.45	299.36	0.00	0.00	0.00	0.00
18	N1	-232.91	-134.47	-852.45	0.00	0.00	0.00

18	S2	0.00	299.36	852.45	0.00	0.00	0.00
19	S1	-232.91	-134.47	852.45	0.00	0.00	0.00
19	N2	0.00	299.36	-852.45	0.00	0.00	0.00
20	L1	12.50	7.22	0.00	0.00	0.00	0.00
20	R1	12.50	7.22	0.00	0.00	0.00	0.00
21	N1	12.50	7.22	0.00	0.00	0.00	0.00
21	S1	12.50	7.22	0.00	0.00	0.00	0.00
22	L2	-2582.37	14.43	0.00	0.00	0.00	0.00
22	R2	2582.37	14.43	0.00	0.00	0.00	0.00
23	N2	0.00	14.43	-2582.37	0.00	0.00	0.00
23	S2	0.00	14.43	2582.37	0.00	0.00	0.00

LOADING CONDITION 2

JOINT COORDINATE SYSTEM

NODE DISPLACEMENTS

NO	NODE	X-TRAN	Y-TRAN	Z-TRAN	X-ROT	Y-ROT	Z-ROT
1	KPT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	L1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
3	R1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
4	L2	6.05903	-0.53017	-9.00000	0.00000	0.00000	-0.00062
5	R2	7.33321	-0.53017	-9.00000	0.00000	0.00000	0.00062
6	TOPL	6.69612	-4.03993	-9.00000	0.00000	0.00000	-0.02754
7	TOPR	6.69612	-4.03993	-9.00000	0.00000	0.00000	0.02754
8	TOPN	6.69612	-4.03993	-9.00000	0.02754	0.00000	0.00000
9	TOPS	6.69612	-4.03993	-9.00000	-0.02754	0.00000	0.00000
10	N1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
11	S1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
12	N2	6.69612	-0.53017	-9.63709	0.00062	0.00000	0.00000
13	S2	6.69612	-0.53017	-8.36291	-0.00062	0.00000	0.00000

LOADING CONDITION 3

JOINT COORDINATE SYSTEM

MEMBER FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
4	L1	3505.19	-329.22	0.00	0.00	0.00	-119999.72
4	L2	-2037.72	-2847.98	0.00	0.00	0.00	-124526.65
5	R1	1467.47	3200.20	0.00	0.00	0.00	119999.72
5	R2	2037.72	-2847.98	0.00	0.00	0.00	124526.65
6	L2	5472.54	2534.18	0.00	0.00	0.00	124526.65
6	TOPL	-5472.54	-2497.81	0.00	0.00	0.00	0.00
7	R2	-5472.54	2534.18	0.00	0.00	0.00	-124526.65
7	TOPR	5472.54	-2497.81	0.00	0.00	0.00	0.00
8	N1	2486.33	1435.49	2037.72	59999.86	-103922.16	0.00
8	N2	0.00	-2847.98	-2037.72	124526.65	0.00	0.00
9	S1	2486.33	1435.49	-2037.72	-59999.86	103922.16	0.00
9	S2	0.00	-2847.98	2037.72	-124526.65	0.00	0.00
10	N2	0.00	2534.18	5472.54	-124526.65	0.00	0.00
10	TOPN	0.00	-2497.81	-5472.54	0.00	0.00	0.00
11	S2	0.00	2534.18	-5472.54	124526.65	0.00	0.00
11	TOPS	0.00	-2497.81	5472.54	0.00	0.00	0.00
12	L1	2.99	-0.80	0.00	0.00	0.00	0.00
12	TOPL	-2.19	-2.19	0.00	0.00	0.00	0.00
13	R1	0.80	2.99	0.00	0.00	0.00	0.00
13	TOPR	2.19	-2.19	0.00	0.00	0.00	0.00
14	N1	1.90	1.09	2.19	0.00	0.00	0.00
14	TOPN	0.00	-2.19	-2.19	0.00	0.00	0.00
15	S1	1.90	1.09	-2.19	0.00	0.00	0.00
15	TOPS	0.00	-2.19	2.19	0.00	0.00	0.00
16	L1	-659.13	603.77	0.00	0.00	0.00	0.00
16	R2	852.45	299.36	0.00	0.00	0.00	0.00
17	R1	193.32	-872.71	0.00	0.00	0.00	0.00
17	L2	-852.45	299.36	0.00	0.00	0.00	0.00
18	N1	-232.91	-134.47	-852.45	0.00	0.00	0.00

18	S2	0.00	299.36	852.45	0.00	0.00	0.00
19	S1	-232.91	-134.47	852.45	0.00	0.00	0.00
19	N2	0.00	299.36	-852.45	0.00	0.00	0.00
20	L1	12.50	7.22	0.00	0.00	0.00	0.00
20	R1	12.50	7.22	0.00	0.00	0.00	0.00
21	N1	12.50	7.22	0.00	0.00	0.00	0.00
21	S1	12.50	7.22	0.00	0.00	0.00	0.00
22	L2	-2582.37	14.43	0.00	0.00	0.00	0.00
22	R2	2582.37	14.43	0.00	0.00	0.00	0.00
23	N2	0.00	14.43	-2582.37	0.00	0.00	0.00
23	S2	0.00	14.43	2582.37	0.00	0.00	0.00

LOADING CONDITION 3

JOINT COORDINATE SYSTEM

NODE DISPLACEMENTS

NO	NODE	X-TRAN	Y-TRAN	Z-TRAN	X-ROT	Y-ROT	Z-ROT
1	KPT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	L1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
3	R1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
4	L2	6.05903	-0.53017	-9.00000	0.00000	0.00000	-0.00062
5	R2	7.33321	-0.53017	-9.00000	0.00000	0.00000	0.00062
6	TOPL	6.69612	-4.03993	-9.00000	0.00000	0.00000	-0.02754
7	TOPR	6.69612	-4.03993	-9.00000	0.00000	0.00000	0.02754
8	TOPN	6.69612	-4.03993	-9.00000	0.02754	0.00000	0.00000
9	TOPS	6.69612	-4.03993	-9.00000	-0.02754	0.00000	0.00000
10	N1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
11	S1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
12	N2	6.69612	-0.53017	-9.63709	0.00062	0.00000	0.00000
13	S2	6.69612	-0.53017	-8.36291	-0.00062	0.00000	0.00000

LOADING CONDITION 4

JOINT COORDINATE SYSTEM

MEMBER FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
4	L1	10521.66	-988.11	0.00	0.00	0.00	-360198.23
4	L2	-6116.61	-8548.99	0.00	0.00	0.00	-373794.45
5	R1	4405.05	9606.10	0.00	0.00	0.00	360198.23
5	R2	6116.61	-8548.99	0.00	0.00	0.00	373794.45
6	L2	16427.46	7607.01	0.00	0.00	0.00	373794.45
6	TOPL	-16427.46	-7497.90	0.00	0.00	0.00	0.00
7	R2	-16427.46	7607.01	0.00	0.00	0.00	-373794.45
7	TOPR	16427.46	-7497.90	0.00	0.00	0.00	0.00
8	N1	7463.36	4309.00	6116.61	180099.11	-311938.87	0.00
8	N2	0.00	-8548.99	-6116.61	373794.45	0.00	0.00
9	S1	7463.36	4309.00	-6116.61	-180099.11	311938.87	0.00
9	S2	0.00	-8548.99	6116.61	-373794.45	0.00	0.00
10	N2	0.00	7607.01	16427.46	-373794.45	0.00	0.00
10	TOPN	0.00	-7497.90	-16427.46	0.00	0.00	0.00
11	S2	0.00	7607.01	-16427.46	373794.45	0.00	0.00
11	TOPS	0.00	-7497.90	16427.46	0.00	0.00	0.00
12	L1	2.87	-0.77	0.00	0.00	0.00	0.00
12	TOPL	-2.10	-2.10	0.00	0.00	0.00	0.00
13	R1	0.77	2.87	0.00	0.00	0.00	0.00
13	TOPR	2.10	-2.10	0.00	0.00	0.00	0.00
14	N1	1.82	1.05	2.10	0.00	0.00	0.00
14	TOPN	0.00	-2.10	-2.10	0.00	0.00	0.00
15	S1	1.82	1.05	-2.10	0.00	0.00	0.00
15	TOPS	0.00	-2.10	2.10	0.00	0.00	0.00
16	L1	-1978.79	1812.55	0.00	0.00	0.00	0.00
16	R2	2559.13	898.68	0.00	0.00	0.00	0.00
17	R1	580.33	-2619.96	0.00	0.00	0.00	0.00
17	L2	-2559.13	898.68	0.00	0.00	0.00	0.00
18	N1	-699.23	-403.70	-2559.13	0.00	0.00	0.00

18	S2	0.00	898.68	2559.13	0.00	0.00	0.00
19	S1	-699.23	-403.70	2559.13	0.00	0.00	0.00
19	N2	0.00	898.68	-2559.13	0.00	0.00	0.00
20	L1	37.49	21.65	0.00	0.00	0.00	0.00
20	R1	37.49	21.65	0.00	0.00	0.00	0.00
21	N1	37.49	21.65	0.00	0.00	0.00	0.00
21	S1	37.49	21.65	0.00	0.00	0.00	0.00
22	L2	-7751.73	43.30	0.00	0.00	0.00	0.00
22	R2	7751.73	43.30	0.00	0.00	0.00	0.00
23	N2	0.00	43.30	-7751.73	0.00	0.00	0.00
23	S2	0.00	43.30	7751.73	0.00	0.00	0.00

LOADING CONDITION 4

JOINT COORDINATE SYSTEM

NODE DISPLACEMENTS

NO	NODE	X-TRAN	Y-TRAN	Z-TRAN	X-ROT	Y-ROT	Z-ROT
1	KPT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	L1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
3	R1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
4	L2	4.78383	-0.78695	-9.00000	0.00000	0.00000	-0.00188
5	R2	8.60841	-0.78695	-9.00000	0.00000	0.00000	0.00188
6	TOPL	6.69612	-11.32255	-9.00000	0.00000	0.00000	-0.08268
7	TOPR	6.69612	-11.32255	-9.00000	0.00000	0.00000	0.08268
8	TOPN	6.69612	-11.32255	-9.00000	0.08268	0.00000	0.00000
9	TOPS	6.69612	-11.32255	-9.00000	-0.08268	0.00000	0.00000
10	N1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
11	S1	3.00000	-6.00000	-9.00000	0.00000	0.00000	0.00000
12	N2	6.69612	-0.78695	-10.91229	0.00188	0.00000	0.00000
13	S2	6.69612	-0.78695	-7.08771	-0.00188	0.00000	0.00000

OUTPUT RESULT

LOADING CONDITION 1

MEMBER COORDINATE SYSTEM

MEMBER FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
4	L1	2870.98	2037.72	0.00	0.00	0.00	119999.72
4	L2	-2847.98	-2037.72	0.00	0.00	0.00	124526.64
5	R1	2870.98	2037.72	0.00	0.00	0.00	119999.72
5	R2	-2847.98	-2037.72	0.00	0.00	0.00	124526.64
6	L2	5993.09	-673.57	0.00	0.00	0.00	-124526.64
6	TOPL	-5981.59	639.06	0.00	0.00	0.00	0.00
7	R2	5993.09	-673.57	0.00	0.00	0.00	-124526.64
7	TOPR	-5981.59	639.06	0.00	0.00	0.00	0.00
8	N1	2870.98	2037.72	0.00	0.00	0.00	119999.72
8	N2	-2847.98	-2037.72	0.00	0.00	0.00	124526.64
9	S1	2870.98	2037.72	0.00	0.00	0.00	119999.72
9	S2	-2847.98	-2037.72	0.00	0.00	0.00	124526.64
10	N2	5993.09	-673.57	0.00	0.00	0.00	-124526.64
10	TOPN	-5981.59	639.06	0.00	0.00	0.00	0.00
11	S2	5993.09	-673.57	0.00	0.00	0.00	-124526.64
11	TOPS	-5981.59	639.06	0.00	0.00	0.00	0.00
12	L1	3.10	0.00	0.00	0.00	0.00	0.00
12	TOPL	-3.10	0.00	0.00	0.00	0.00	0.00
13	R1	3.10	0.00	0.00	0.00	0.00	0.00
13	TOPR	-3.10	0.00	0.00	0.00	0.00	0.00
14	N1	3.10	0.00	0.00	0.00	0.00	0.00
14	TOPN	-3.10	0.00	0.00	0.00	0.00	0.00
15	S1	3.10	0.00	0.00	0.00	0.00	0.00
15	TOPS	-3.10	0.00	0.00	0.00	0.00	0.00
16	L1	-893.75	-14.43	0.00	0.00	0.00	0.00
16	R2	903.37	-14.43	0.00	0.00	0.00	0.00
17	R1	-893.75	-14.43	0.00	0.00	0.00	0.00
17	L2	903.37	-14.43	0.00	0.00	0.00	0.00

18	N1	-893.75	-14.43	0.00	0.00	0.00	0.00
18	S2	903.37	-14.43	0.00	0.00	0.00	0.00
19	S1	-893.75	-14.43	0.00	0.00	0.00	0.00
19	N2	903.37	-14.43	0.00	0.00	0.00	0.00
20	L1	0.00	14.43	0.00	0.00	0.00	0.00
20	R1	0.00	14.43	0.00	0.00	0.00	0.00
21	N1	0.00	0.00	-14.43	0.00	0.00	0.00
21	S1	0.00	0.00	-14.43	0.00	0.00	0.00
22	L2	-2582.37	-14.43	0.00	0.00	0.00	0.00
22	R2	2582.37	-14.43	0.00	0.00	0.00	0.00
23	N2	-2582.37	-14.43	0.00	0.00	0.00	0.00
23	S2	2582.37	-14.43	0.00	0.00	0.00	0.00

LOADING CONDITION 2

MEMBER COORDINATE SYSTEM

MEMBER FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
4	L1	2870.98	2037.72	0.00	0.00	0.00	119999.72
4	L2	-2847.98	-2037.72	0.00	0.00	0.00	124526.65
5	R1	2870.98	2037.72	0.00	0.00	0.00	119999.72
5	R2	-2847.98	-2037.72	0.00	0.00	0.00	124526.65
6	L2	5993.09	-673.57	0.00	0.00	0.00	-124526.65
6	TOPL	-5981.59	639.06	0.00	0.00	0.00	0.00
7	R2	5993.09	-673.57	0.00	0.00	0.00	-124526.65
7	TOPR	-5981.59	639.06	0.00	0.00	0.00	0.00
8	N1	2870.98	2037.72	0.00	0.00	0.00	119999.72
8	N2	-2847.98	-2037.72	0.00	0.00	0.00	124526.65
9	S1	2870.98	2037.72	0.00	0.00	0.00	119999.72
9	S2	-2847.98	-2037.72	0.00	0.00	0.00	124526.65
10	N2	5993.09	-673.57	0.00	0.00	0.00	-124526.65
10	TOPN	-5981.59	639.06	0.00	0.00	0.00	0.00
11	S2	5993.09	-673.57	0.00	0.00	0.00	-124526.65
11	TOPS	-5981.59	639.06	0.00	0.00	0.00	0.00
12	L1	3.10	0.00	0.00	0.00	0.00	0.00
12	TOPL	-3.10	0.00	0.00	0.00	0.00	0.00
13	R1	3.10	0.00	0.00	0.00	0.00	0.00
13	TOPR	-3.10	0.00	0.00	0.00	0.00	0.00
14	N1	3.10	0.00	0.00	0.00	0.00	0.00
14	TOPN	-3.10	0.00	0.00	0.00	0.00	0.00
15	S1	3.10	0.00	0.00	0.00	0.00	0.00
15	TOPS	-3.10	0.00	0.00	0.00	0.00	0.00
16	L1	-893.75	-14.43	0.00	0.00	0.00	0.00
16	R2	903.37	-14.43	0.00	0.00	0.00	0.00
17	R1	-893.75	-14.43	0.00	0.00	0.00	0.00
17	L2	903.37	-14.43	0.00	0.00	0.00	0.00
18	N1	-893.75	-14.43	0.00	0.00	0.00	0.00

18	S2	903.37	-14.43	0.00	0.00	0.00	0.00
19	S1	-893.75	-14.43	0.00	0.00	0.00	0.00
19	N2	903.37	-14.43	0.00	0.00	0.00	0.00
20	L1	0.00	14.43	0.00	0.00	0.00	0.00
20	R1	0.00	14.43	0.00	0.00	0.00	0.00
21	N1	0.00	0.00	-14.43	0.00	0.00	0.00
21	S1	0.00	0.00	-14.43	0.00	0.00	0.00
22	L2	-2582.37	-14.43	0.00	0.00	0.00	0.00
22	R2	2582.37	-14.43	0.00	0.00	0.00	0.00
23	N2	-2582.37	-14.43	0.00	0.00	0.00	0.00
23	S2	2582.37	-14.43	0.00	0.00	0.00	0.00

LOADING CONDITION 3

MEMBER COORDINATE SYSTEM

MEMBER FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
4	L1	2870.98	2037.72	0.00	0.00	0.00	119999.72
4	L2	-2847.98	-2037.72	0.00	0.00	0.00	124526.65
5	R1	2870.98	2037.72	0.00	0.00	0.00	119999.72
5	R2	-2847.98	-2037.72	0.00	0.00	0.00	124526.65
6	L2	5993.09	-673.57	0.00	0.00	0.00	-124526.65
6	TOPL	-5981.59	639.06	0.00	0.00	0.00	0.00
7	R2	5993.09	-673.57	0.00	0.00	0.00	-124526.65
7	TOPR	-5981.59	639.06	0.00	0.00	0.00	0.00
8	N1	2870.98	2037.72	0.00	0.00	0.00	119999.72
8	N2	-2847.98	-2037.72	0.00	0.00	0.00	124526.65
9	S1	2870.98	2037.72	0.00	0.00	0.00	119999.72
9	S2	-2847.98	-2037.72	0.00	0.00	0.00	124526.65
10	N2	5993.09	-673.57	0.00	0.00	0.00	-124526.65
10	TOPN	-5981.59	639.06	0.00	0.00	0.00	0.00
11	S2	5993.09	-673.57	0.00	0.00	0.00	-124526.65
11	TOPS	-5981.59	639.06	0.00	0.00	0.00	0.00
12	L1	3.10	0.00	0.00	0.00	0.00	0.00
12	TOPL	-3.10	0.00	0.00	0.00	0.00	0.00
13	R1	3.10	0.00	0.00	0.00	0.00	0.00
13	TOPR	-3.10	0.00	0.00	0.00	0.00	0.00
14	N1	3.10	0.00	0.00	0.00	0.00	0.00
14	TOPN	-3.10	0.00	0.00	0.00	0.00	0.00
15	S1	3.10	0.00	0.00	0.00	0.00	0.00
15	TOPS	-3.10	0.00	0.00	0.00	0.00	0.00
16	L1	-893.75	-14.43	0.00	0.00	0.00	0.00
16	R2	903.37	-14.43	0.00	0.00	0.00	0.00
17	R1	-893.75	-14.43	0.00	0.00	0.00	0.00
17	L2	903.37	-14.43	0.00	0.00	0.00	0.00
18	N1	-893.75	-14.43	0.00	0.00	0.00	0.00

18	S2	903.37	-14.43	0.00	0.00	0.00	0.00
19	S1	-893.75	-14.43	0.00	0.00	0.00	0.00
19	N2	903.37	-14.43	0.00	0.00	0.00	0.00
20	L1	0.00	14.43	0.00	0.00	0.00	0.00
20	R1	0.00	14.43	0.00	0.00	0.00	0.00
21	N1	0.00	0.00	-14.43	0.00	0.00	0.00
21	S1	0.00	0.00	-14.43	0.00	0.00	0.00
22	L2	-2582.37	-14.43	0.00	0.00	0.00	0.00
22	R2	2582.37	-14.43	0.00	0.00	0.00	0.00
23	N2	-2582.37	-14.43	0.00	0.00	0.00	0.00
23	S2	2582.37	-14.43	0.00	0.00	0.00	0.00

LOADING CONDITION 4

MEMBER COORDINATE SYSTEM

MEMBER FORCES

NO	NODE	FX	FY	FZ	MX	MY	MZ
4	L1	8618.00	6116.61	0.00	0.00	0.00	360198.23
4	L2	-8548.99	-6116.61	0.00	0.00	0.00	373794.45
5	R1	8618.00	6116.61	0.00	0.00	0.00	360198.23
5	R2	-8548.99	-6116.61	0.00	0.00	0.00	373794.45
6	L2	17990.01	-2021.83	0.00	0.00	0.00	-373794.45
6	TOPL	-17955.50	1918.31	0.00	0.00	0.00	0.00
7	R2	17990.01	-2021.83	0.00	0.00	0.00	-373794.45
7	TOPR	-17955.50	1918.31	0.00	0.00	0.00	0.00
8	N1	8618.00	6116.61	0.00	0.00	0.00	360198.23
8	N2	-8548.99	-6116.61	0.00	0.00	0.00	373794.45
9	S1	8618.00	6116.61	0.00	0.00	0.00	360198.23
9	S2	-8548.99	-6116.61	0.00	0.00	0.00	373794.45
10	N2	17990.01	-2021.83	0.00	0.00	0.00	-373794.45
10	TOPN	-17955.50	1918.31	0.00	0.00	0.00	0.00
11	S2	17990.01	-2021.83	0.00	0.00	0.00	-373794.45
11	TOPS	-17955.50	1918.31	0.00	0.00	0.00	0.00
12	L1	2.97	0.00	0.00	0.00	0.00	0.00
12	TOPL	-2.97	0.00	0.00	0.00	0.00	0.00
13	R1	2.97	0.00	0.00	0.00	0.00	0.00
13	TOPR	-2.97	0.00	0.00	0.00	0.00	0.00
14	N1	2.97	0.00	0.00	0.00	0.00	0.00
14	TOPN	-2.97	0.00	0.00	0.00	0.00	0.00
15	S1	2.97	0.00	0.00	0.00	0.00	0.00
15	TOPS	-2.97	0.00	0.00	0.00	0.00	0.00
16	L1	-2683.12	-43.30	0.00	0.00	0.00	0.00
16	R2	2711.99	-43.30	0.00	0.00	0.00	0.00
17	R1	-2683.12	-43.30	0.00	0.00	0.00	0.00
17	L2	2711.99	-43.30	0.00	0.00	0.00	0.00
18	N1	-2683.12	-43.30	0.00	0.00	0.00	0.00

18	S2	2711.99	-43.30	0.00	0.00	0.00	0.00
19	S1	-2683.12	-43.30	0.00	0.00	0.00	0.00
19	N2	2711.99	-43.30	0.00	0.00	0.00	0.00
20	L1	0.00	43.30	0.00	0.00	0.00	0.00
20	R1	0.00	43.30	0.00	0.00	0.00	0.00
21	N1	0.00	0.00	-43.30	0.00	0.00	0.00
21	S1	0.00	0.00	-43.30	0.00	0.00	0.00
22	L2	-7751.73	-43.30	0.00	0.00	0.00	0.00
22	R2	7751.73	-43.30	0.00	0.00	0.00	0.00
23	N2	-7751.73	-43.30	0.00	0.00	0.00	0.00
23	S2	7751.73	-43.30	0.00	0.00	0.00	0.00

MANUAL CHECK: JOINT EQUILIBRIUM FOR JOINT "TOP"S

THE OUPUT FILE "RESULT" FOR LOADING CONDITION 1, UNDER JOINT COORDINATE SYSTEM, WE HAVE FOR NODE "TOP"S WITH ALL MEMBER FORCES AS FOLLOWS:

MEMBER		SIX COMPONENTS OF LOADS					
NO	NODE	FX	FY	FZ	MX	MY	MZ
6	TOPL	-5472.54	-2497.81	0.00	0.00	0.00	0.00
7	TOPR	5472.54	-2497.81	0.00	0.00	0.00	0.00
10	TOPN	0.00	-2497.81	-5472.54	0.00	0.00	0.00
11	TOPS	0.00	-2497.81	5472.54	0.00	0.00	0.00
12	TOPL	-2.19	-2.19	0.00	0.00	0.00	0.00
13	TOPR	2.19	-2.19	0.00	0.00	0.00	0.00
14	TOPN	0.00	-2.19	-2.19	0.00	0.00	0.00
15	TOPS	0.00	-2.19	2.19	0.00	0.00	0.00
SUMMATION		0.0	-10000.00	0.0	0.0	0.0	0.0

ALL LOADS ACTING ON MEMBERS AT NODE "TOP"S IS PRECISELY IN EQUILIBRIUM WITH APPLIED EXTERNAL JOINT LOAD AT "TOP"S FROM "LOAD.DAT" FILE FOR LOADING CONDITION 1.

JOINT LOAD
TOPR Y -10000.

THE OUPUT FILE "RESULT" FOR LOADING CONDITION 4, UNDER JOINT COORDINATE SYSTEM, WE HAVE FOR NODE "TOP"S WITH ALL MEMBER FORCES AS FOLLOWS:

MEMBER		SIX COMPONENTS OF LOADS					
NO	NODE	FX	FY	FZ	MX	MY	MZ
6	TOPL	-16427.46	-7497.90	0.00	0.00	0.00	0.00
7	TOPR	16427.46	-7497.90	0.00	0.00	0.00	0.00
10	TOPN	0.00	-7497.90	-16427.46	0.00	0.00	0.00
11	TOPS	0.00	-7497.90	16427.46	0.00	0.00	0.00
12	TOPL	-2.10	-2.10	0.00	0.00	0.00	0.00
13	TOPR	2.10	-2.10	0.00	0.00	0.00	0.00
14	TOPN	0.00	-2.10	-2.10	0.00	0.00	0.00
15	TOPS	0.00	-2.10	2.10	0.00	0.00	0.00
SUMMATION		0.0	-30000.00	0.0	0.0	0.0	0.0

ALL LOADS ACTING ON MEMBERS AT NODE "TOP"S IS PRECISELY IN EQUILIBRIUM WITH APPLIED EXTERNAL JOINT LOAD AT "TOP"S FROM "LOAD.DAT" FILE FOR LOADING CONDITION 4.

LOAd COMbination

$ LOAD CASE	COMBINATION FACTOR	LOAD CASE	COMBINATION FACTOR
1	1.4	2	1.6

SINCE LOADING CONDITION 1 AND LOADING CONDITION 2 ARE THE SAME WITH DIFFERENT FORMS OF INPUT, THE COMBINATION IS FOR JOINT LOAD AT "TOP"S TO BE 3 TIMES (1.4+1.6) AS BIG AS (10000.0) THAT FOR LOADING CONDITION 1.

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$ POWERFUL EXAMPLE OF NON-LINEAR ANALYSIS:
$ ONE SET OF INPUT WITH ONE SET OF OUTPUT IN ONE RUN FOR FINAL RESULTS
$ TO OBTAIN UNLIMITED NUMBER OF LOAD CASES INCLUDING CORRECT NON-LINEAR
$ EFFECT OF LOAD COMBINATIONS.
$ OTHER COMPETITOR'S PROGRAM NEXT IN LINE IN CAPABILITY IS TO MANUALLY
$ INPUT, MANUALLY STUDY RESULTS IN SEQUENCES WITH 100 SETS OF INPUT AND
$ 100 SETS OF OUTPUTS OR MORE.
$ IT IS A SMALL JOB HERE FOR  USP  VS OTHERS, A BIG PROJECT BEYOND
$ ECONOMIC ALLOWABLE.
$
$ 3-D GABLE STRUCTURE WITH GEOMETRICAL AND LOADING SYMMETRY
$ THE OUTPUT IS CONSISTENT IN THE FORM OF 4 OF A KIND OR A PAIR
$ THUS IT CAN BE VISUALLY AND QUICKLY VERIFIED AS A ROUGH CHECK.
$
$ CAEINC. WARRANTS THAT PROGRAM SHALL PERFORM SUBTANTIALLY IN COMPLIANCE
$ WITH SPECIFICATIONS.  HERE IS A SMALL TIP ON HOW YOU CAN VERIFY IT.
$
$ THOUGH, THE EXAMPLE CONTAINS POWERFUL NON-LINEAR THEORY, OBLIQUE COOR-
$ NATE AND SUPPORT MOVEMENTS.
$ MANUALLY, THE RESULT CAN BE CHECKED FOR STATICAL EQUILIBRIUM AND
$ COMPATABILITY IN STRAIN VS STRESS RELATIONSHIP.
$ A SOPHOREMORE IN ENGINNERING WITH UNDERSTANDING OF STATICS AND
$ STRENGTH OF MATERIAL CAN CHECK IT.
    COMPLETE    INPUT AND OUTPUT ARE PROVIDED FOR YOUR CHECK.
$
$  SEE FILE "HANDCHEC.TOP"  FOR STATIC EQUILIBRIUM MANUAL CHECK.
$
$ A TEST POLIT, WHO DOES NOT HAVE TO POSSESS THE TECHNOLOGICAL
$ CAPABILITY OF THE PLANE MANUFACTURER AND WHO, IF SUPPLIED WITH A REAL
$  COMPLETE  AIR PLANE CAN VERIFY THE PLANE'S CAPABILITY.
$ ASK OUR COMPETITOR TO SUPPLY YOU WITH   COMPLETE   INPUT AND OUTPUT.
$ DO NOT ACCEPT IMCOMPLETE INPUT AND OUTPUT WITH " AS IS " WARRANTY.
$ CHARGE THE SUPPLIER WITH FRAUD AND DECEPTION IF YOU ARE CHEATED EVEN
$ SUPPLIER SAYS IT WILL NOT ACCEPT RESPONSIBILITY FOR MISREPRESENTATION
$ THAT IS LIKELY TO TURN OUT TO BE THE TIP OF ICEBURG OF ALL KINDS OF
$ MISREPRESENTATIONS.
$
$ PLACE TO FILE SUCH COMPLAINT:
$
$    U S FEDERAL TRADE COMMISSION
$    WASHINGTON D C
$
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