DAT =

Leng: 2

Depth: 2

YMod: 30000000

Nu: 0.3000

Tip\_Load: 1000

nCell\_Leng: 4

nCell\_Depth: 1

Serch\_NDP: 1.5000

GSchm\_nPts: 2

BC\_nSides: 4

ShFn\_nTerms: 3

Nodal XCord: 0.000 0.000 0.500 0.500 1.000 1.000

Nodal XCord: 1.500 1.500 2.000 2.000

Nodal YCord: 1.000 -1.000 1.000 -1.000 1.000 -1.000

Nodal YCord: 1.000 -1.000 1.000 -1.000

GPt: -0.577 0.577

Gwt: 1.000 1.000

Create\_Cell\_Mesh\_Grid\_Points\_Model

1- th Cell Nodes: 1 3 4 2

1- th Cell XCord: 0.000 0.500 0.500 0.000

1 -th Cell YCord: 1.000 1.000 -1.000 -1.000

2- th Cell Nodes: 3 5 6 4

2- th Cell XCord: 0.500 1.000 1.000 0.500

2 -th Cell YCord: 1.000 1.000 -1.000 -1.000

3- th Cell Nodes: 5 7 8 6

3- th Cell XCord: 1.000 1.500 1.500 1.000

3 -th Cell YCord: 1.000 1.000 -1.000 -1.000

4- th Cell Nodes: 7 9 10 8

4- th Cell XCord: 1.500 2.000 2.000 1.500

4 -th Cell YCord: 1.000 1.000 -1.000 -1.000

Parameters of Guassian Quadrature Points

#Cell #Gpt Xcor Ycor Weight Jacobian

1 1 0.106 0.577 1.000 -0.250

1 2 0.106 -0.577 1.000 -0.250

1 3 0.394 0.577 1.000 -0.250

1 4 0.394 -0.577 1.000 -0.250

2 1 0.606 0.577 1.000 -0.250

2 2 0.606 -0.577 1.000 -0.250

2 3 0.894 0.577 1.000 -0.250

2 4 0.894 -0.577 1.000 -0.250

3 1 1.106 0.577 1.000 -0.250

3 2 1.106 -0.577 1.000 -0.250

3 3 1.394 0.577 1.000 -0.250

3 4 1.394 -0.577 1.000 -0.250

4 1 1.606 0.577 1.000 -0.250

4 2 1.606 -0.577 1.000 -0.250

4 3 1.894 0.577 1.000 -0.250

4 4 1.894 -0.577 1.000 -0.250

Gauss Quad Points and its Active Nodes

#Cell #Gpt #AcNds Active Nodes

1 1 6 1 2 3 4 5 6

1 2 6 1 2 3 4 5 6

1 3 6 1 2 3 4 5 7

1 4 6 1 2 3 4 5 7

2 1 5 1 3 5 7 9

2 2 5 1 3 5 7 9

2 3 5 1 3 5 7 9

2 4 5 1 3 5 7 9

3 1 5 1 3 5 7 9

3 2 5 1 3 5 7 9

3 3 5 1 3 5 7 9

3 4 5 1 3 5 7 9

4 1 4 3 5 7 9

4 2 4 3 5 7 9

4 3 3 5 7 9

4 4 3 5 7 9

Displ-Boudry Nodes lying on Beams Boundaries

Nodes on Boundary Side 1 No. Nodes, 5

BC\_Nodes: 1 3 5 7 9

Nodes on Boundary Side 2 No. Nodes, 5

BC\_Nodes: 2 4 6 8 10

Nodes on Boundary Side 3 No. Nodes, 2

BC\_Nodes: 9 10

Nodes on Boundary Side 4 No. Nodes, 2

GSchm\_nPts: 2

BC\_nSides: 4

ShFn\_nTerms: 3

GCPt: [2x1 double]

GCWt: [2x1 double]

Guss Points on the Boundary Sides

Gauss Pts on Boundary Side 1 and their No., 8

XGpt: 0.106 0.394 0.606 0.894 1.106 1.394 1.606 1.894

YGpt: 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000

WGpt: 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000

JGpt: 0.250 0.250 0.250 0.250 0.250 0.250 0.250 0.250

Gauss Pts on Boundary Side 2 and their No., 8

XGpt: 0.106 0.394 0.606 0.894 1.106 1.394 1.606 1.894

YGpt: -1.000 -1.000 -1.000 -1.000 -1.000 -1.000 -1.000 -1.000

WGpt: 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000

JGpt: 0.250 0.250 0.250 0.250 0.250 0.250 0.250 0.250

Gauss Pts on Boundary Side 3 and their No., 2

XGpt: 2.000 2.000

YGpt: 0.577 -0.577

WGpt: 1.000 1.000

JGpt: 1.000 1.000

Gauss Pts on Boundary Side 4 and their No., 2

XGpt: 0.000 0.000

YGpt: 0.577 -0.577

WGpt: 1.000 1.000

JGpt: 1.000 1.000

DAT =

Leng: 2

Depth: 2

YMod: 30000000

Nu: 0.3000

Tip\_Load: 1000

nCell\_Leng: 4

nCell\_Depth: 1

Serch\_NDP: 1.5000

GSchm\_nPts: 2

BC\_nSides: 4

ShFn\_nTerms: 3

GCPt: [2x1 double]

GCWt: [2x1 double]

MDL =

Intg\_nCells: 4

nNodes: 10

Cell\_Depth: 2

Cell\_Leng: 0.5000

Node\_XCord: [10x1 double]

Node\_YCord: [10x1 double]

nCells: 4

Cell\_nGQPts: 4

Cell\_Nodes: [4x4 double]

Cell\_XCord: [4x4 double]

Cell\_YCord: [4x4 double]

GausXCPt: [4x4 double]

GausYCPt: [4x4 double]

GausWCPt: [4x4 double]

GausJCPt: [4x4 double]

nTGPts: 0

Serch\_Radius: 0.7500

GPts\_Active\_nNodes: [4x4 double]

GPts\_Active\_Node: [4x4x6 double]

BC\_Side\_nNodes: [5 5 2 2]

BC\_Side\_Node: [4x5 double]

BC\_Side\_XGPt: [4x8 double]

BC\_Side\_YGPt: [4x8 double]

BC\_Side\_WGPt: [4x8 double]

BC\_Side\_JGPt: [4x8 double]

BC\_Side\_nGPts: [8 8 2 2]