

```
In[ ]:= Clear["Global`*"];
```

清除

```
nodelist = {{0, 0}, {2, 0}, {0, 2}};
```

```
tri = Polygon[nodelist];
```

多边形

tri

```
Out[ ]:= Polygon[
```



Number of points: 3  
Embedding dimension: 2

```
In[ ]:= res = NDSolveValue[{- $\nabla_{\{x,y\}}^2$  u[x, y] ==
```

数值解的值

```
NeumannValue[1., x == 0],
```

诺伊曼边值

```
DirichletCondition[u[x, y] == 0., y == 0]}, u, {x, y} ∈
```

狄里克雷条件

```
tri]
```

```
Out[ ]:= InterpolatingFunction[
```



Domain: {{0., 2.}, {0., 2.}}  
Output: scalar

```
In[ ]:= figure = DensityPlot[res[x, y], {x, y} ∈ tri,
```

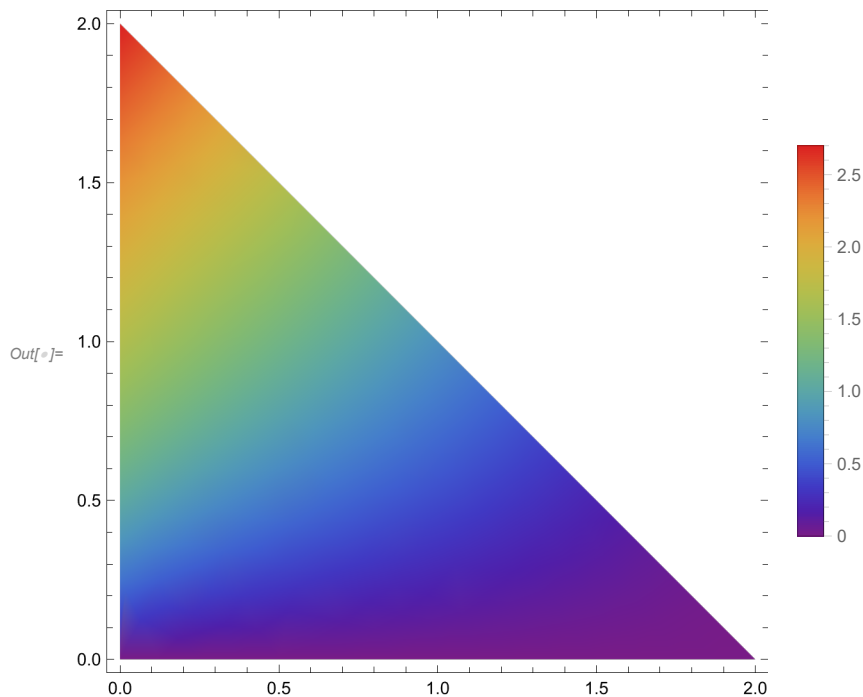
密度图

```
PlotLegends → Automatic, ColorFunction → "Rainbow"]
```

绘图的图例

自动

颜色函数



```
In[ ]:= Export["../Desktop//problem1_mma_solution.pdf", figure];
```

导出

```
Export["../Desktop//problem1_mma_solution.png", figure]
```

导出

```
Out[ ]:= ../Desktop//problem1_mma_solution.png
```