tetra.ms
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This is a Maple worksheet to display a tetrahedron.
The following command loads some plotting macros.

```
> with(plots):
```

We first define the coordinates of the four points.

```
> a:=[0,0,0];
  b:=[1,0,0];
  c:=[0,1,0];
  d:=[0,0,1];
```

$$a := [0, 0, 0]$$

$$b := [1, 0, 0]$$

$$c := [0, 1, 0]$$

$$d := [0, 0, 1]$$

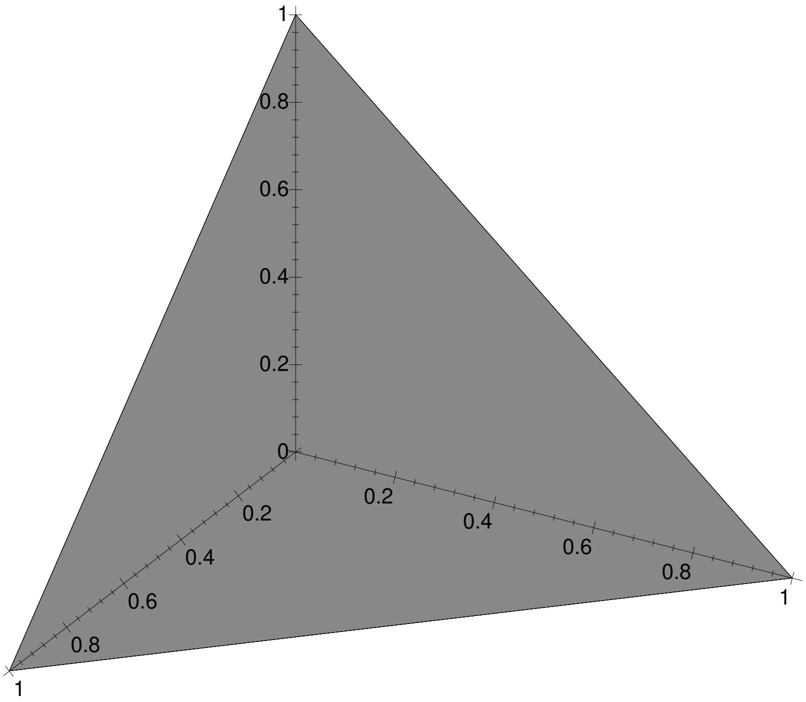
The tetrahedron is described as a list of four triangles, each with three points.

```
> tetrahedron:=[[a,b,c],[a,b,d],[a,c,d],[b,c,d]];
```

$$tetrahedron := [[[0, 0, 0], [1, 0, 0], [0, 1, 0]], [[0, 0, 0], [1, 0, 0], [0, 0, 1]], [[0, 0, 0], [0, 1, 0], [0, 0, 1]], [[1, 0, 0], [0, 1, 0], [0, 0, 1]]]$$

The tetrahedron is ready to display. Try using the mouse to drag the picture to different orientations. After doing this, you may need to redisplay the picture by clicking one or more mouse buttons, perhaps simultaneously, or clicking on the "R" icon at the top of the window.

```
> polygonplot3d(tetrahedron,style=patch,axes=normal,orient
  ation=[30,60]);
```


1
0.8
0.6
0.4
0.2
0
0.2
0.4
0.6
0.8
1
0.2
0.4
0.6
0.8
1

>