

```

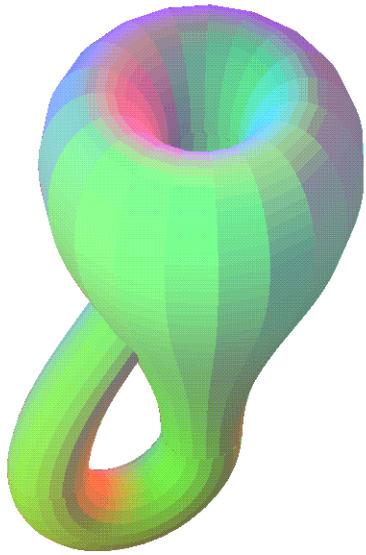
[>
> with(plottools):

[>
> kleinpoints := proc ()
local bottom, middle, handle, top, p, q;
top := [(2.5 + 1.5*cos(v))*cos(u), (2.5 + 1.5*cos(v))*sin(u),
-2.5 *sin(v)]:
middle := [ (2.5 + 1.5*cos(v)) * cos(u), (2.5 + 1.5*cos(v)) *
sin(u), 3*v - 6 * Pi ]:
handle := [ 2 - 2*cos(v) + sin(u), cos(u), 3 * v - 6 * Pi]:
bottom := [2 + (2 + cos(u))*cos(v),sin(u), -3 * Pi + (2 +
cos(u)) * sin(v) ] :
p := plot3d ( {bottom, middle, handle, top}, u = 0.. 2* Pi, v =
Pi .. 2*Pi, grid = [20,20]):
p := select ( x-> op(0,x) = MESH, [op(p)]);
seq( convert(q,
POLYGONS), q=p);end:

[>
> kleinBottle := plots[display] (kleinpoints(), lightmodel=light1,
scaling=constrained, style=patchnogrid,
orientation=[55,44], grid=[60,60]):

[>
[>
> plots[display]( kleinBottle );

```



```
[> v
[> v
[> plotsetup(ps,plotoutput=`plot.ps`,plotoptions=`portrait,color,no
border`):
[> v
[> v
[> v
```