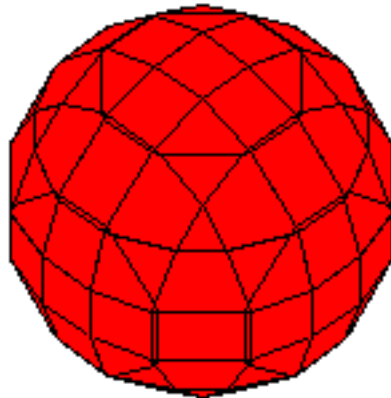


```
> with(plots):  
> h:=x^2+y^2+z^2=1;  
h := x2 + y2 + z2 = 1 (1)
```

```
> e:=4*x^2+x*y+5*y^2+3*z^2=4;  
e := 4x2 + xy + 5y2 + 3z2 = 4 (2)
```

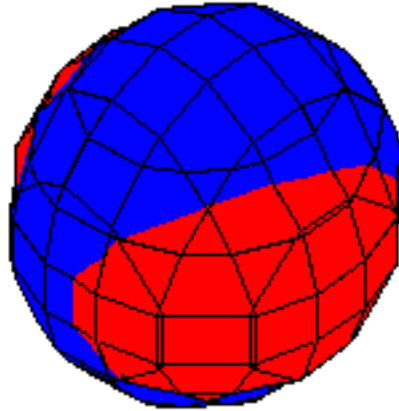
```
> H:=implicitplot3d(h,x=-3/2..3/2,y=-3/2..3/2,z=-3/2..3/2,color=  
red);  
H := PLOT3D(...) (3)
```

```
> display(H);
```



```
> E:=implicitplot3d(e,x=-3/2..3/2,y=-3/2..3/2,z=-3/2..3/2,color=  
blue);  
E := PLOT3D(...) (4)
```

```
> display({H,E});
```



```
> sol:=solve({h,e},{x,y,z});
sol := [[x=RootOf(_Z^2 + _Zy + 2y^2 - 1), y=y, z=RootOf(_Z^2 - y^2 - RootOf(_Z^2 + _Zy
+ 2y^2 - 1) y)]] (5)
```

```
> sol1:=allvalues(sol[1]);
sol1 := [x = -1/2 y + 1/2 sqrt(-7y^2 + 4), y = y, z = sqrt(1/2 y^2 + 1/2 y sqrt(-7y^2 + 4))], [x = -1/2 y
+ 1/2 sqrt(-7y^2 + 4), y = y, z = -sqrt(1/2 y^2 + 1/2 y sqrt(-7y^2 + 4))], [x = -1/2 y
- 1/2 sqrt(-7y^2 + 4), y = y, z = sqrt(1/2 y^2 - 1/2 y sqrt(-7y^2 + 4))], [x = -1/2 y
- 1/2 sqrt(-7y^2 + 4), y = y, z = -sqrt(1/2 y^2 - 1/2 y sqrt(-7y^2 + 4))] (6)
```

```
> nops([sol1]);
4 (7)
```

```
> for n from 1 to 4 do
c[n]:=spacecurve([seq(rhs(sol1[n,k]),k=1..3)],y=-3/4..3/4,
```

```
thickness=2,color=yellow):  
od;
```

```
 $c_1 := PLOT3D(...)$ 
```

```
 $c_2 := PLOT3D(...)$ 
```

```
 $c_3 := PLOT3D(...)$ 
```

```
 $c_4 := PLOT3D(...)$ 
```

(8)

```
> display({c[1],c[2],c[3],c[4],E,H});
```

