

Gotisk vindue

restart

with(plots) :

R := 4 :

Parametriseringer:

Venstre del:

r1 := (u, v, w) → ⟨R + w, -R + 2 · R · cos(u), v · (0 + 2 · R · sin(u))⟩ :

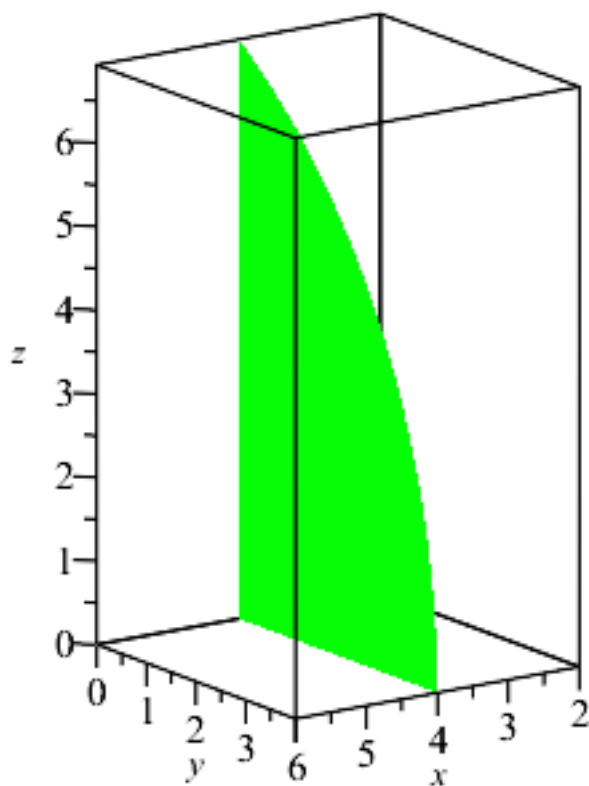
$$r1(u, v, w) = \begin{bmatrix} 4 + w \\ -4 + 8 \cos(u) \\ 8 v \sin(u) \end{bmatrix}$$

Højre del:

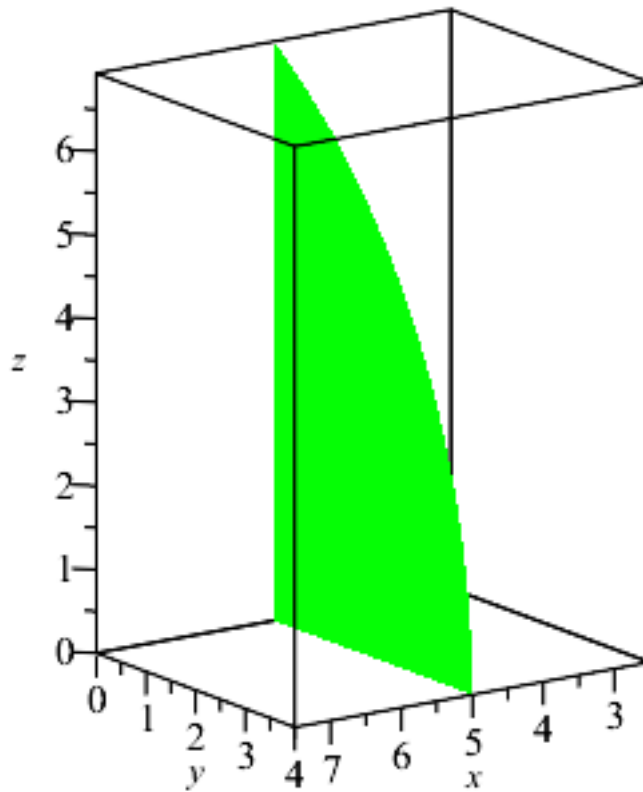
r2 := (u, v, w) → ⟨R + w, R + 2 · R · cos(u), v · (0 + 2 · R · sin(u))⟩ :

$$r2(u, v, w) = \begin{bmatrix} 4 + w \\ 4 + 8 \cos(u) \\ 8 v \sin(u) \end{bmatrix}$$

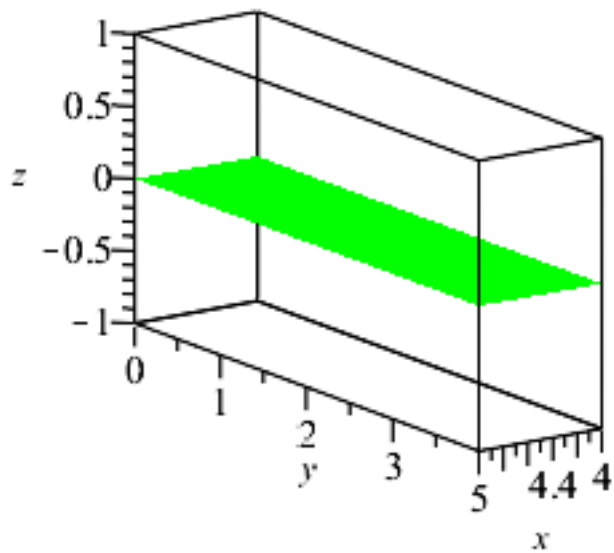
p1 := plot3d(r1(u, v, 0), u = 0 .. arccos(1/2), v = 0 .. 1, scaling = constrained, labels = [x, y, z], color = green, style = patchnogrid)



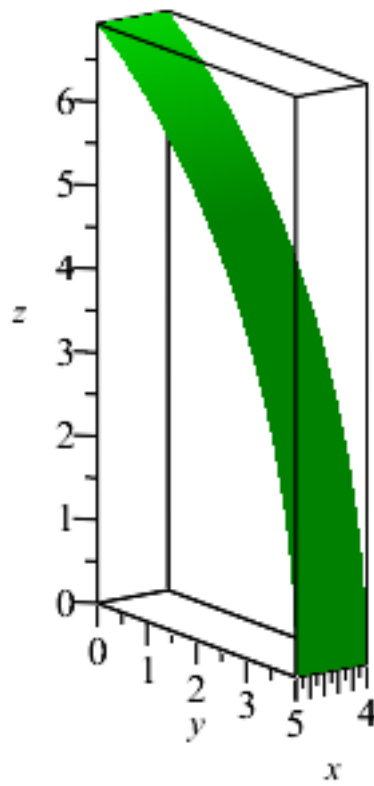
```
p2 := plot3d(r1(u, v, 1), u = 0 .. arccos(1/2), v = 0 .. 1, scaling = constrained, labels = [x, y, z], color = green, style = patchnogrid)
```



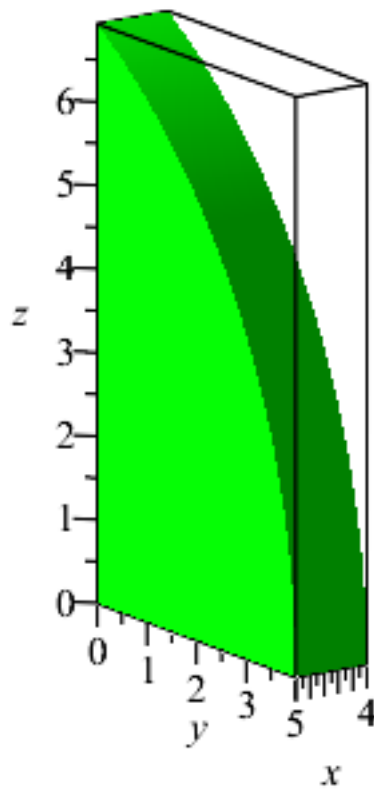
```
p3 := plot3d(r1(u, 0, w), u = 0 .. arccos(1/2), w = 0 .. 1, scaling = constrained, labels = [x, y, z],  
color = green, style = patchnogrid)
```



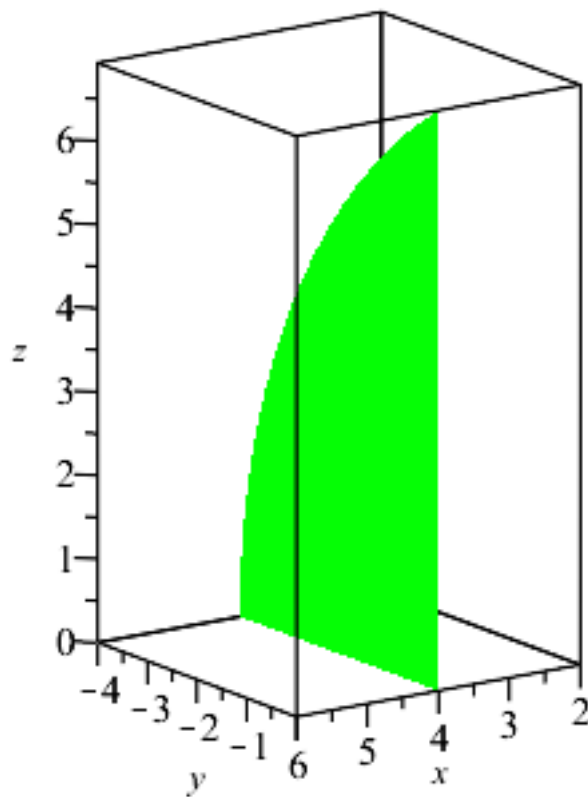
```
p4 := plot3d(r1(u, 1, w), u = 0 .. arccos(1/2), w = 0 .. 1, scaling = constrained, labels = [x, y, z],  
color = green, style = patchnogrid)
```



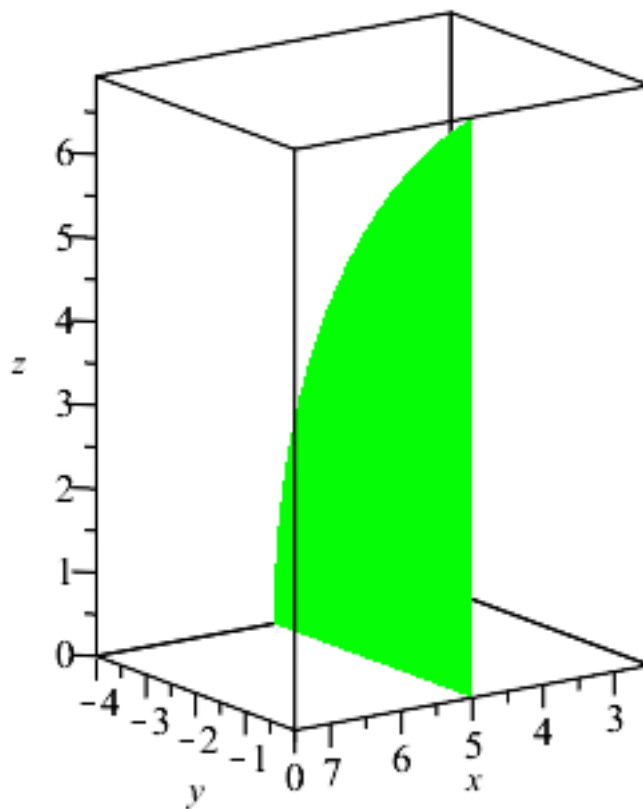
$V := display(p1, p2, p3, p4)$



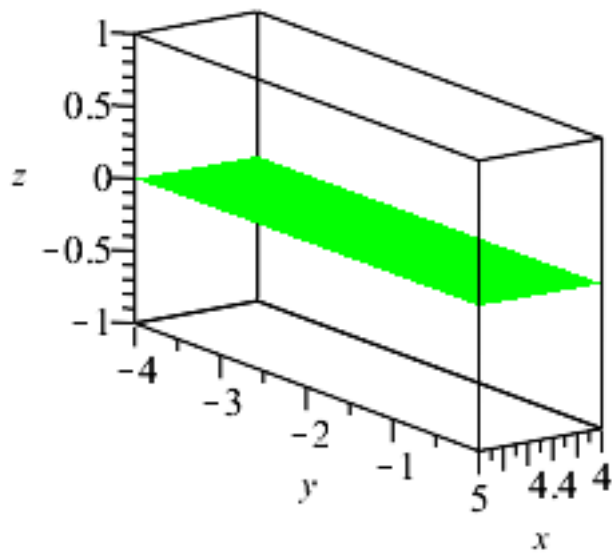
```
p5 := plot3d(r2(u, v, 0), u =  $\pi - \arccos\left(\frac{1}{2}\right) .. \pi$ , v = 0 .. 1, scaling = constrained, labels = [x, y, z],  
color = green, style = patchnograd)
```



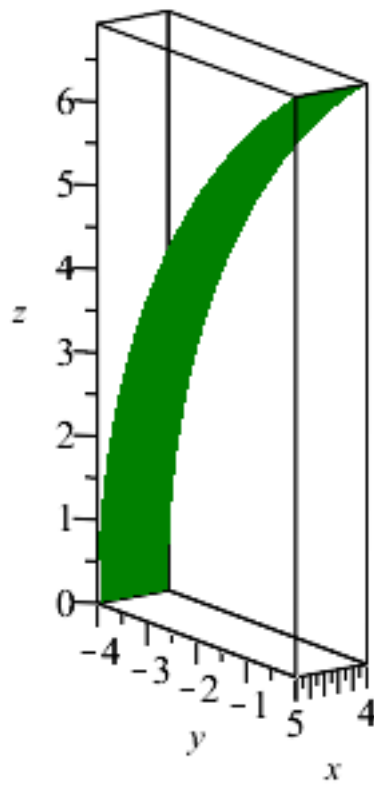
```
p6 := plot3d(r2(u, v, 1), u =  $\pi - \arccos\left(\frac{1}{2}\right) .. \pi$ , v = 0 .. 1, scaling = constrained, labels = [x, y, z],  
color = green, style = patchnogrid)
```



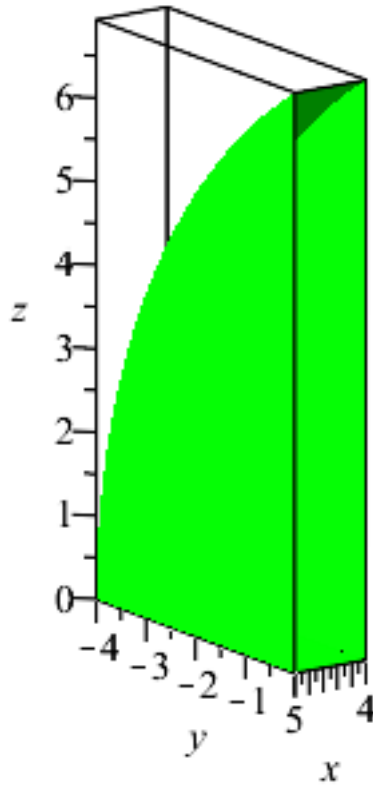
```
p7 := plot3d(r2(u, 0, w), u =  $\pi - \arccos\left(\frac{1}{2}\right) .. \pi$ , w = 0 .. 1, scaling = constrained, labels = [x, y, z],  
color = green, style = patchnogrid)
```

```
p8 := plot3d(r2(u, 1, w), u =  $\pi - \arccos\left(\frac{1}{2}\right) .. \pi$ , w = 0 .. 1, scaling = constrained, labels = [x, y, z],  
color = green, style = patchnogrid)
```



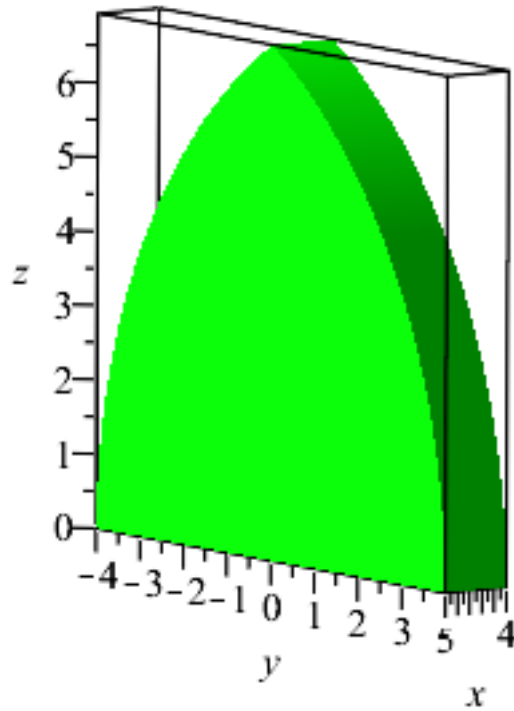
$H := display(p5, p6, p7, p8)$



NB: For at se tegningen nedenfor, skal man gå ind i Tools, Options og stille Precision fra 1 million til mindst 2 millioner (her er valgt 10 millioner):

Limit expression length to 10000000

`gotisk := display(V, H, scaling = constrained)`



```
Export("gotisk.stl", gotisk, base = homedir)
```

1843284

(1)

NB : Tallet angiver filens størrelse i bytes.