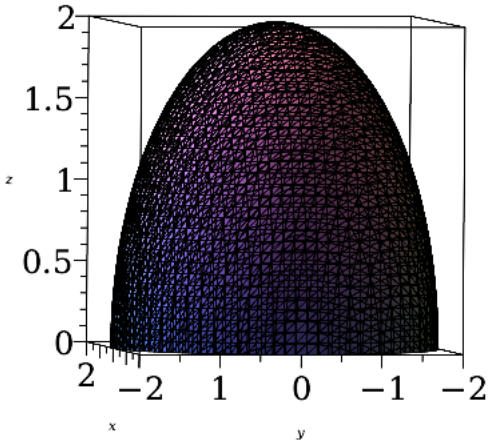
```
> restart : with(LinearAlgebra) : with(plots) : with(plottools) : with(inttrans) :
      with(VectorCalculus) : SetCoordinates('cartesian'[x, y, z]) :
> a := 2 :
> implicitplot3d(x^2 + y^2 + z^2 = a^2, z = 0..2, x = -2..2, y = -2..2); a = 'a':
```




```
> M := int(int(k·r·cos(theta)·r^2·sin(theta), theta = 0..Pi/2), phi = 0..2·Pi)
```

$$M := k\,r^3\,\pi \tag{1}$$

```
> Mz := 1/M ·int(int(k·r·cos(theta)·r·cos(theta)·r^2·sin(theta), theta = 0..Pi/2),
      phi = 0..2·Pi)
```

$$Mz := \frac{2\,r}{3} \tag{2}$$

```
>
```