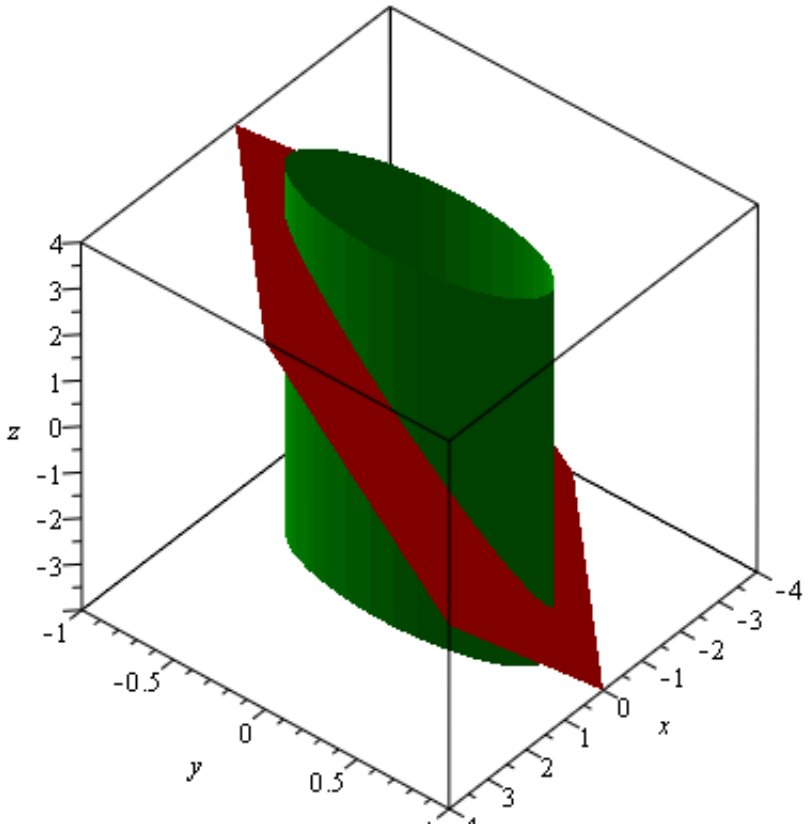
```
> with(plots):
> with(Student[MultivariateCalculus]):
> f := (x, y, z) → z:
> g1 := (x, y, z) → x^2 + 2 y^2 − 1:
> g2 := (x, y, z) → z − x + 4 y:
> P1 := implicitplot3d(g1(x, y, z) = 0, x = -1..1, y = -1/sqrt(2)..1/sqrt(2), z = -4..4, color
      = "Green", numpoints = 1000, style = patchnogrid):
> P2 := implicitplot3d(g2(x, y, z) = 0, x = -4..4, y = -1..1, z = -4..4, color = "Red", numpoints
      = 1000, style = patchnogrid):
> display(P1, P2, axes = boxed, orientation = [40, 50])
```




```
> LagrangeMultipliers(f(x, y, z), [g1(x, y, z), g2(x, y, z)], [x, y, z])
```

$$\left[\frac{1}{3}, -\frac{2}{3}, 3\right], \left[-\frac{1}{3}, \frac{2}{3}, -3\right] \qquad \textbf{(1)}$$

```
>
```