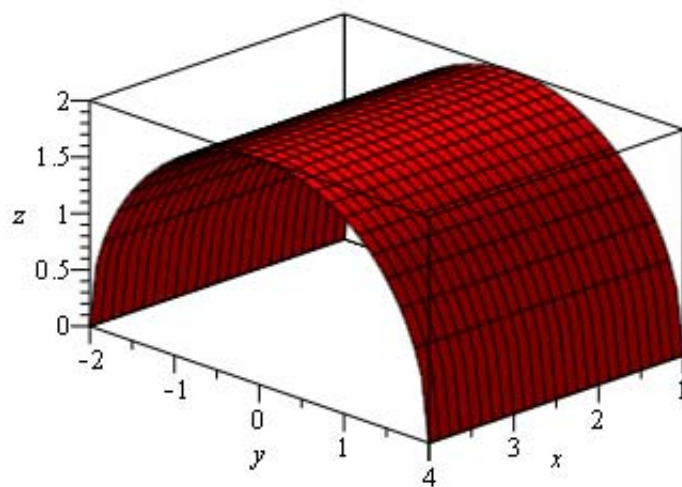


```

> with(plots) :
> plot3d([x, y, sqrt(4 - y^2)], x = 1 .. 4, y = -2 .. 2, color = "Red", scaling = constrained, axes
= boxed, labels = [x, y, z], orientation = [45, 70]);

```



```

> with(Student[VectorCalculus]) :
> SurfaceInt(z, [x, y, z] = Surface(<x, y, sqrt(4 - y^2)>, x = 1 .. 4, y = -2 .. 2), output = integral);
> SurfaceInt(z, [x, y, z] = Surface(<x, y, sqrt(4 - y^2)>, x = 1 .. 4, y = -2 .. 2));

```

$$\int_1^4 \int_{-2}^2 \sqrt{4 - y^2} \sqrt{1 + \frac{y^2}{4 - y^2}} \, dy \, dx$$

24

(1)