

**Math 53 Discussion**

**Practice Problems:** 15.1–15.2, double integrals, review of trig identities for 15.3

1) Find the volume of the solid that lies under the plane

$$4x + 6y - 2z + 15 = 0$$

and above  $[-1, 2] \times [-1, 1]$ .

2) Find the volume of the solid lying under the elliptic paraboloid  $x^2/4 + y^2/9 + z = 1$  and above the rectangle  $R = [-1, 1] \times [-2, 2]$ .

Over  $\rightarrow$

3) Find  $\int \cos^3 \theta \sin \theta \, d\theta$ .

4) Find  $\int \cos^2 \theta \sin^2 \theta \, d\theta$ .