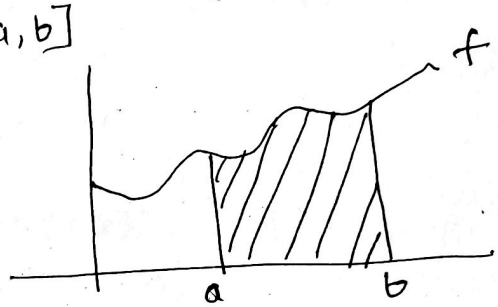
Lecture :- 16 DOUBLE INTEGRALS

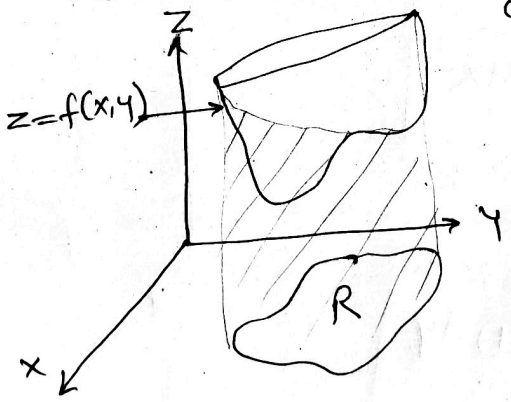
Remember: function of 1 variable

$$\int_a^b f(x)\,dx = \text{area below graph of 'f' over } [a,b]$$

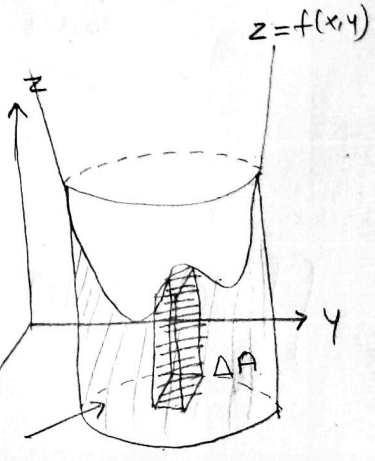


⊕ function with two variable x & y ; Then we'll look at the volume that's below the graph $z = f(x,y)$

Double Integral = volume below graph $z = f(x,y)$ over a region R in xy-plane.



$$\iint_R f(x,y)\,dA$$



$$\text{Vol} = \iint_R f(x,y)\,dA$$