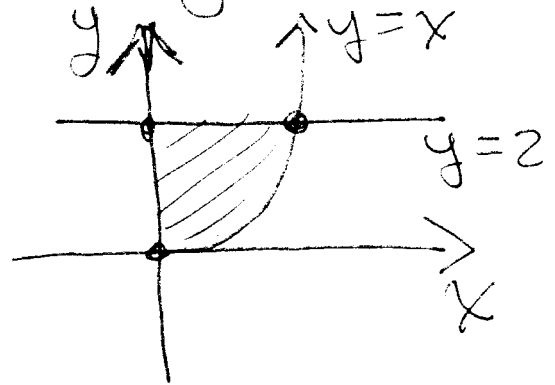


13.3

The area of a closed bounded region R in the xy -plane is

$$\iint_R 1 \, dA$$

ex: Find the area of the region shown



(3.3)

Average value of $f(x,y)$
over R :

$$\frac{1}{\text{area of } R} \iint_R f(x,y) dA$$