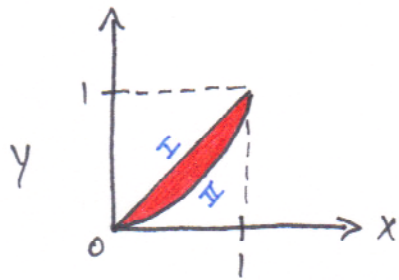


Problem 118

$$f(x,y) = 15y \quad x^2 \leq y \leq x$$



$$\text{I: } y = x$$

$$\text{II: } y = x^2 \quad \text{or} \quad x = \sqrt{y}$$

$$\begin{aligned} g(y) &= \int_y^{\sqrt{y}} 15y \cdot dx \\ &= 15xy \Big|_{x=y}^{x=\sqrt{y}} \\ &= 15y(\sqrt{y} - y) = \underline{15y^{3/2}(1 - y^{1/2})} \quad 0 < y < 1 \end{aligned}$$

E