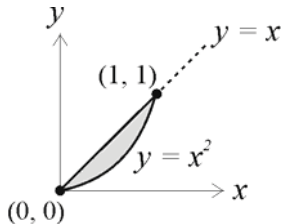


118. Solution: E

The shaded portion of the graph below shows the region over which $f(x, y)$ is nonzero:



We can infer from the graph that the marginal density function of Y is given by

$$g(y) = \int_y^{\sqrt{y}} 15y \, dx = 15xy \Big|_y^{\sqrt{y}} = 15y(\sqrt{y} - y) = 15y^{3/2}(1 - y^{1/2}), \quad 0 < y < 1$$

$$\text{or more precisely, } g(y) = \begin{cases} 15y^{3/2}(1 - y)^{1/2}, & 0 < y < 1 \\ 0 & \text{otherwise} \end{cases}$$