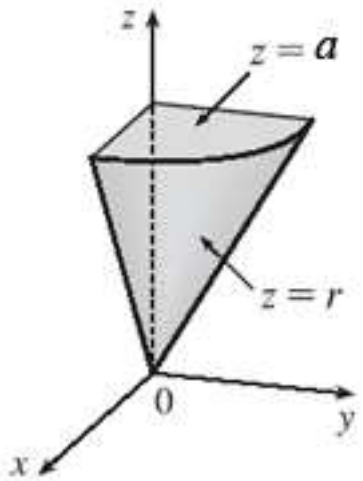
$z = r = \sqrt{x^2 + y^2}$ is a cone that opens upward. Thus $r \leq z \leq 6$ is the region above this cone and beneath the horizontal plane $z = 6$. $0 \leq \theta \leq \frac{\pi}{2}$ restricts the solid to that part of this region in the first octant.



Assume $a = 6$