

$x = 5 - u^2 - 4v^2$  ,  $y = u$  ,  $z = v$  where  $u^2 + 4v^2 \leq 5$  since  $x \geq 0$  . Then the associated vector equation is

$$\mathbf{r}(u, v) = (5 - u^2 - 4v^2) \mathbf{i} + u \mathbf{j} + v \mathbf{k} .$$