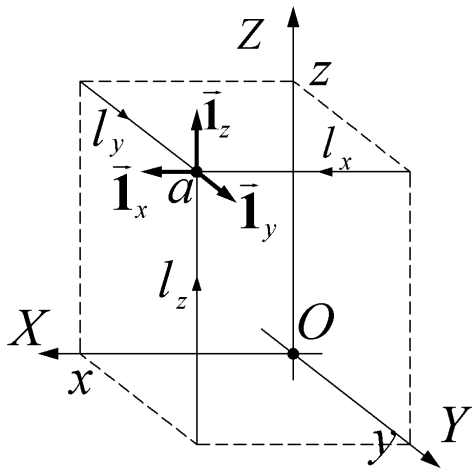
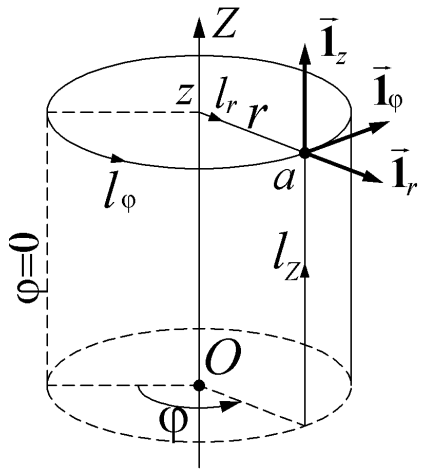
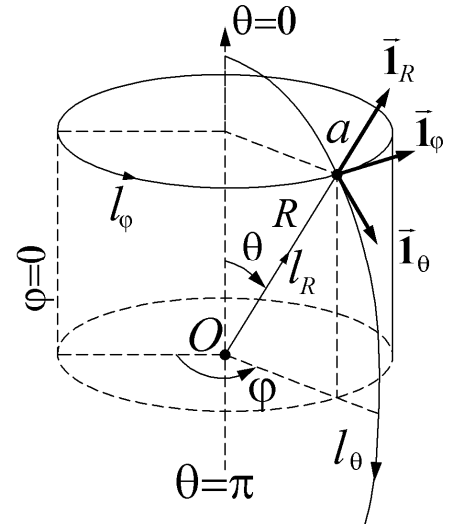


Системы координат

СК	Декартова	Цилиндрическая	Сферическая
ξ_k	x, y, z	r, φ, z	R, θ, φ
h_k	$1, 1, 1$	$1, r, 1$	$1, R, \sin\theta$
Рисунок			
$x, y, z \rightarrow$	$x = x$ $y = y$ $z = z$	$r = \sqrt{x^2 + y^2}$ $\varphi = \text{arctg}(y/x)$ $z = z$	$R = \sqrt{x^2 + y^2 + z^2}$ $\theta = \text{arctg}(\sqrt{x^2 + y^2}/z)$ $\varphi = \text{arctg}(y/x)$
$r, \varphi, z \rightarrow$	$x = r \cos \varphi$ $y = r \sin \varphi$ $z = z$	$r = r$ $\varphi = \varphi$ $z = z$	$R = \sqrt{r^2 + z^2}$ $\theta = \text{arctg}(r/z)$ $\varphi = \varphi$
$R, \theta, \varphi \rightarrow$	$x = R \sin \theta \cos \varphi$ $y = R \sin \theta \sin \varphi$ $z = R \cos \theta$	$r = R \sin \theta$ $\varphi = \varphi$ $z = R \cos \theta$	$R = R$ $\theta = \theta$ $\varphi = \varphi$