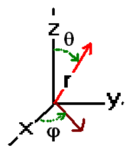
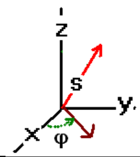
I think you'll find this useful 2016

Spherical Coordinates	Cylindrical Coordinates
$\vec{A}=A_r\hat{r}+A_\theta\hat{\theta}+A_\phi\hat{\phi}$	$\vec{A}=A_s\hat{s}+A_\phi\hat{\phi}+A_z\hat{z}$
$\hat{r}=\sin(\theta)\cos(\phi)\hat{x}+\sin(\theta)\sin(\phi)\hat{y}+\cos(\theta)\hat{z}$ $\hat{\theta}=\cos(\theta)\cos(\phi)\hat{x}+\cos(\theta)\sin(\phi)\hat{y}-\sin(\theta)\hat{z}$ $\hat{\phi}=-\sin(\phi)\hat{x}+\cos(\phi)\hat{y}$ ——— $\hat{x}=\sin(\theta)\cos(\phi)\hat{r}+\cos(\theta)\cos(\phi)\hat{\theta}-\sin(\phi)\hat{\phi}$ $\hat{y}=\sin(\theta)\sin(\phi)\hat{r}+\cos(\theta)\sin(\phi)\hat{\theta}+\cos(\phi)\hat{\phi}$ $\hat{z}=\cos(\theta)\hat{r}-\sin(\theta)\hat{\theta}$	$\hat{s}=\cos(\phi)\hat{x}+\sin(\phi)\hat{y}$ $\hat{\phi}=-\sin(\phi)\hat{x}+\cos(\phi)\hat{y}$ $\hat{z}=\hat{z}$ ——— $\Rightarrow\hat{y}=\hat{s}\sin(\phi)+\hat{\phi}\cos(\phi)$ $\hat{x}=\hat{s}\cos(\phi)-\hat{\phi}\sin(\phi)$ $\hat{z}=\hat{z}$
 $x=r\sin(\theta)\cos(\phi)$ $y=r\sin(\theta)\sin(\phi)$ $z=r\cos(\theta)$	 $x=s\cos(\phi)$ $y=s\sin(\phi)$ $z=z$
$d\vec{A}=r^2\sin(\theta)\,d\theta\, d\phi\,\hat{r}$	$d\vec{A}=s\,d\phi\, ds\,\hat{z}$
$d\tau=r^2\sin(\theta)dr\ d\theta\ d\phi$ $[r:0\to+\infty],[\theta:0\to\pi],[\phi:0\to2\pi]$	$d\tau=s\,ds\ d\phi\ dz$ $[s:0\to+\infty],[\phi:0\to2\pi],[z:-\infty\to+\infty]$
$d\vec{l}=dr\,\hat{r}+r\,d\theta\,\hat{\theta}+r\sin(\theta)d\phi\,\hat{\phi}$	$d\vec{l}=ds\,\hat{x}+s\,d\phi\,\hat{\phi}+dz\,\hat{z}$
$\vec{\nabla}T=\frac{\partial T}{\partial r}\hat{r}+\frac{1}{r}\frac{\partial T}{\partial\theta}\hat{\theta}+\frac{1}{r\sin(\theta)}\frac{\partial T}{\partial\phi}\hat{\phi}$	$\vec{\nabla}T=\frac{\partial T}{\partial s}\hat{s}+\frac{1}{s}\frac{\partial T}{\partial\phi}\hat{\phi}+\frac{\partial T}{\partial z}\hat{z}$
$\vec{\nabla}\cdot\vec{V}=\frac{1}{r^2}\frac{\partial(r^2V_r)}{\partial r}+\frac{1}{r\sin(\theta)}\frac{\partial(\sin(\theta)V_\theta)}{\partial\theta}+\frac{1}{r\sin(\theta)}\frac{\partial V_\phi}{\partial\phi}$	$\vec{\nabla}\cdot\vec{V}=\frac{1}{s}\frac{\partial(sV_s)}{\partial s}+\frac{1}{s}\frac{\partial V_\phi}{\partial\phi}+\frac{\partial V_z}{\partial z}$
$\vec{\nabla}\times\vec{V}=\frac{1}{r\sin\theta}\left[\frac{\partial(\sin(\theta)V_\phi)}{\partial\theta}-\frac{\partial V_\theta}{\partial\phi}\right]\hat{r}+\frac{1}{r}\left[\frac{1}{\sin(\theta)}\frac{\partial V_r}{\partial\theta}-\frac{\partial(rV_\phi)}{\partial r}\right]\hat{\theta}+\frac{1}{r}\left[\frac{\partial(rV_\theta)}{\partial r}-\frac{\partial V_r}{\partial\theta}\right]\hat{\phi}$	$\vec{\nabla}\times\vec{V}=\left(\frac{1}{s}\frac{\partial V_z}{\partial\phi}-\frac{\partial V_\phi}{\partial z}\right)\hat{s}+\left(\frac{\partial V_s}{\partial z}-\frac{\partial V_z}{\partial s}\right)\hat{\phi}+\frac{1}{s}\left[\frac{\partial(sV_\phi)}{\partial s}-\frac{\partial V_s}{\partial\phi}\right]\hat{z}$
$\vec{\nabla}^2T=\frac{1}{r^2}\frac{\partial}{\partial r}\left(r^2\frac{\partial T}{\partial r}\right)+\frac{1}{r^2\sin(\theta)}\frac{\partial}{\partial\theta}\left(\sin(\theta)\frac{\partial T}{\partial\theta}\right)+\frac{1}{r^2\sin^2(\theta)}\frac{\partial^2T}{\partial\phi^2}$	$\vec{\nabla}^2T=\frac{1}{s}\frac{\partial}{\partial s}\left(s\frac{\partial T}{\partial s}\right)+\frac{1}{s^2}\frac{\partial^2T}{\partial\phi^2}+\frac{\partial^2T}{\partial z^2}$

Fundamental Theorems

Gradients: if

$$dT=(\vec{\nabla}T)\cdot d\vec{L}\text{ then }\oint_{a,\ \text{path}}^{b}(\vec{\nabla}T)\cdot d\vec{L}=T(b)-T(a)$$

Corollaries:

$$\oint_a^b(\vec{\nabla}T)\cdot d\vec{L}\text{ is path independant from a to b}\quad\text{and}\quad\oint_{\text{closed path}}(\vec{\nabla}T)\cdot d\vec{L}=0$$

Divergences: (Gauss's, Green's or Divergence theorem)

$$\oiiint_{\text{volume}}(\vec{\nabla}\cdot\vec{V})d\tau=\oiint_{\text{surface}}\vec{V}\cdot d\vec{A}$$ A is the area bounding the surface.

Curls: (Stokes' Theorem)

$$\oiint_{\text{surface}}(\vec{\nabla}\times\vec{V})\cdot d\vec{A}=\oint_{\text{path}}\vec{V}\cdot d\vec{L}$$ (path L bounds area A)

A **right handed coordinate system** obeys: $\hat{x}\times\hat{y}=\hat{z}$