$$\nabla^2 = \nabla \cdot \nabla = \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} + \frac{\partial^2}{\partial z^2}$$
$$(\nabla^2) f = \partial_x^2 f + \partial_x^2 f + \partial_z^2 f$$

$$\nabla \cdot (\nabla f) = \partial_x^2 f + \partial_y^2 f + \partial_z^2 f$$

$$\nabla^{2} = \nabla \cdot \nabla = \frac{2}{r} \frac{\partial}{\partial r} + \frac{1}{r^{2} \tan(\theta)} \frac{\partial}{\partial \theta} + \frac{\partial^{2}}{\partial r^{2}} + r^{-2} \frac{\partial^{2}}{\partial \theta^{2}} + \frac{1}{r^{2} \sin^{2}(\theta)} \frac{\partial^{2}}{\partial \phi^{2}}$$

$$\left(\nabla^{2}\right)f = \frac{1}{r^{2}}\left(r^{2}\partial_{r}^{2}f + 2r\partial_{r}f + \partial_{\theta}^{2}f + \frac{\partial_{\theta}f}{\tan\left(\theta\right)} + \frac{\partial_{\phi}^{2}f}{\sin^{2}\left(\theta\right)}\right)$$

$$\nabla \cdot (\nabla f) = \frac{1}{r^2} \left(r^2 \partial_r^2 f + 2r \partial_r f + \partial_\theta^2 f + \frac{\partial_\theta f}{\tan(\theta)} + \frac{\partial_\phi^2 f}{\sin^2(\theta)} \right)$$

$$egin{aligned} \left[e_x rac{\partial}{\partial x} + e_y rac{\partial}{\partial y} + e_z rac{\partial}{\partial z}, \ e_x rac{\partial}{\partial x} + e_y rac{\partial}{\partial y} + e_z rac{\partial}{\partial z}
ight] \end{aligned}$$

$$F^r oldsymbol{e}_r + F^ heta oldsymbol{e}_ heta + F^\phi oldsymbol{e}_\phi$$

$$F^r e_r + F^\theta e_\theta + F^\phi e_\theta$$

$$F$$

$$F^r \boldsymbol{e}_r + F^{ heta} \boldsymbol{e}_{ heta} + F^{\phi} \boldsymbol{e}_{ heta}$$

$$F'' oldsymbol{e}_r + F'' oldsymbol{e}_ heta + F'' oldsymbol{e}_\phi \ F$$

$$(F^{r}\mathbf{e}_{r} + F^{\theta}\mathbf{e}_{\theta} + F^{\phi}\mathbf{e}_{\phi}, F^{r}\mathbf{e}_{r} + F^{\theta}\mathbf{e}_{\theta} + F^{\phi}\mathbf{e}_{\phi})$$