

$$\nabla^2\left(\frac{\rho}{r}\right)=\frac{1}{r^2}\left(\frac{\mathrm{d}\rho}{\mathrm{d}r}+r\frac{\mathrm{d}^2\rho}{\mathrm{d}r^2}-\frac{\mathrm{d}\rho}{\mathrm{d}r}\right)$$