Given

Eq. 6 after setting the coefficient of first derivative of T with r equal to 1

$$-A\cdot\frac{\Delta r}{2}-\frac{3}{2}B\Delta r = 1$$

Eq. 7 after setting the coefficient of second derivative of T with r equal to zero

$$\frac{A\cdot\left[\left(\frac{\Delta r}{2}\right)^2\right]}{2!}+\frac{B\cdot\left(\frac{3}{2}\cdot\Delta r\right)^2}{2!} = 0$$

$$\text{Find}(A,B)\rightarrow\begin{pmatrix}\frac{-3}{\Delta r}\\ \frac{1}{3\cdot\Delta r}\end{pmatrix}$$