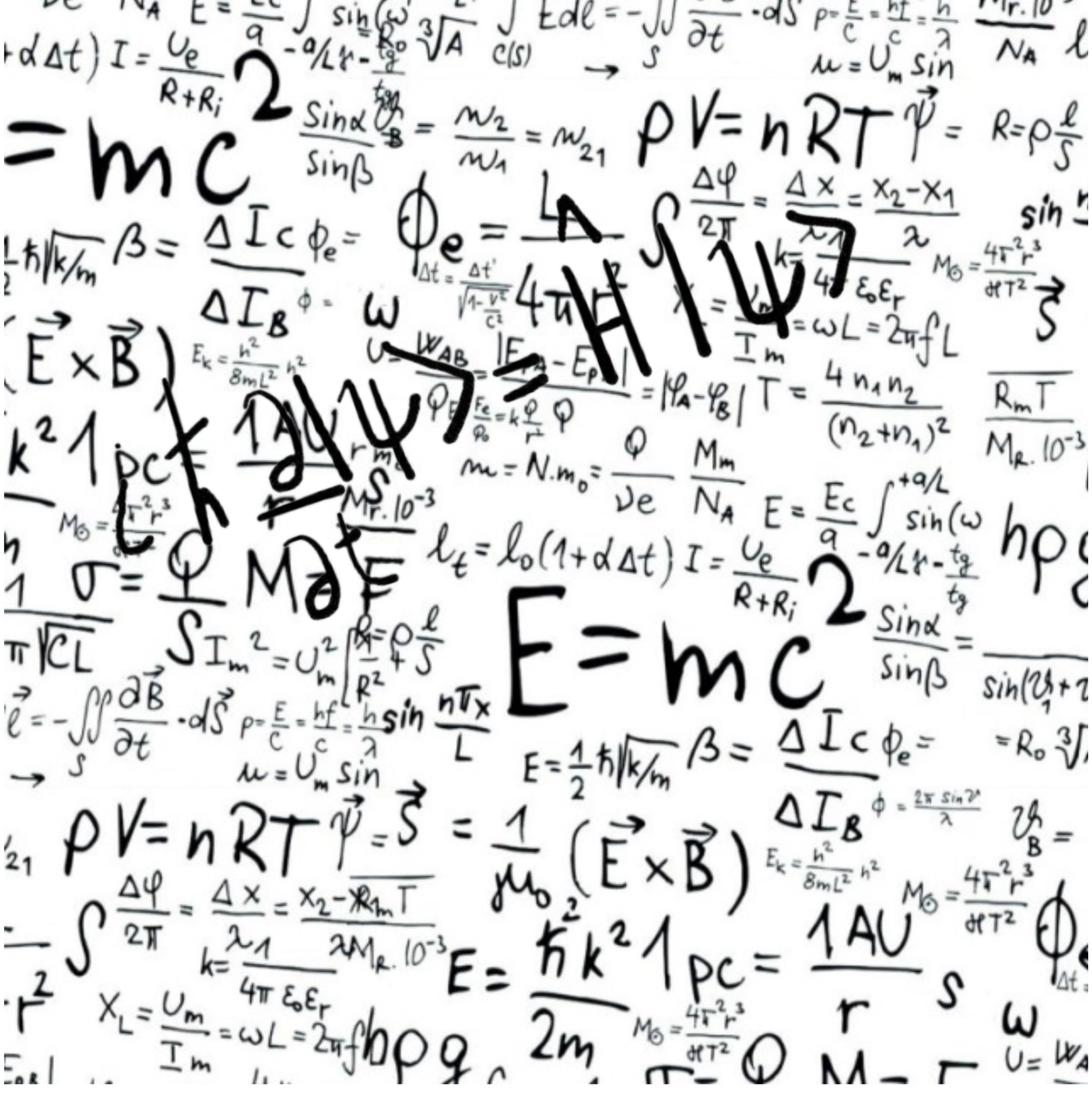

E=mc²
ρV=nRT
E=mc²
ρV=nRT

$$i\hbar \frac{\partial}{\partial t}|\psi\rangle = \hat{H}|\psi\rangle$$

$$\psi(\vec{r}, t) = \phi(\vec{r})\, T(t) \quad \text{—— (i)}$$

$$i\hbar \frac{\partial \psi}{\partial t} = \hat{H}\psi \quad \text{—— (ii)}$$

$$\hat{H} = -\frac{\hbar^2}{2m}\nabla^2 + V(\vec{r})$$

$$i\hbar\, \phi \frac{dT}{dt} = T\left[-\frac{\hbar^2}{2m}\nabla^2 + V\right]\phi \quad \text{and } H = E$$

$$i\hbar \frac{1}{T}\frac{dT}{dt} = \frac{1}{\phi}\hat{H}\phi = \alpha \text{ (say)}$$

$$i\hbar \frac{1}{T}\frac{dT}{dt} = \alpha$$

$$\Rightarrow \frac{dT}{T} = -\frac{i\alpha}{\hbar}\, dt$$

$$\ln T = -\frac{i\alpha}{\hbar} t + k.$$