

Introduction to L^AT_EX

Task 2

Set some maths, here are some standard physics equations taken from Physics 1A and Physics of Fields, typeset as many as you can in *display* mode.

SOME EQUATIONS TO SET.

$$a) \quad \vec{F}_{12} = -\vec{F}_{21}$$

$$b) \quad T = \frac{2 m_1 m_2}{m_1 + m_2} g$$

$$c) \quad \mu_k = \frac{F_A \cos \theta - mg \sin \theta}{F_A \sin \theta + mg \cos \theta}$$

$$d) \quad \vec{E}_T = \vec{E}_2 + \vec{E}_3 + \dots = \sum_{j=2}^N \vec{E}_j$$

where $\vec{E}_j = \frac{1}{4\pi\epsilon_0} \frac{q_j}{r_j^2} \hat{r}_{\pm j}$

$$e) \quad \vec{E}(z) = \frac{\lambda z R}{2\epsilon_0 (R^2 + z^2)^{3/2}} \hat{k}$$

$$f) \quad Z = \sqrt{R^2 + \frac{L}{c} \left(\frac{\omega_d}{\omega_0} - \frac{\omega_0}{\omega_d} \right)^2}$$