Slashdot

The coding & designing
club of IISER Kolkata

LaTeX Worksheet

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Contents

1 Title Page

Try to replicate the title page of this document itself. There are multiple ways to do the same, and one of the ways has been mentioned in handout.

2 Images

(a) Rishab P. Hariharan (22MS045)

(b) Abhratanu Ray (22MS052)

Figure 1: Some more people...

Then, try to reference these images individually as well as combined. Like Figure 1a contain a rare appearance of `/g` user. And Figure 1b contains our CR. The fact is that both of them are math geniuses (Figure 1).

3 Math Commands

3.1 Matrix

$$\begin{pmatrix} 2 & -2 & 0 & \cdots & \cdots & \cdots & 0 \\ -1 & 5 & -2 & \ddots & & & \vdots \\ 0 & -2 & 5 & -2 & \ddots & & \vdots \\ \vdots & \ddots & \ddots & \ddots & \ddots & \ddots & \vdots \\ \vdots & & \ddots & -2 & 5 & -2 & 0 \\ \vdots & & & \ddots & -2 & 5 & -1 \\ 0 & \cdots & \cdots & \cdots & 0 & -2 & 2 \end{pmatrix}_{n\times n}$$

3.2 Align Equations

$$\begin{aligned} b_n &= \frac{1}{L}\left\{ -\int_{-L}^{0} \sin\Big(\frac{n\pi x}{L}\Big)\,\mathrm{d}x + \int_{0}^{L} \sin\Big(\frac{n\pi x}{L}\Big)\,\mathrm{d}x \right\} \\ &= \frac{1}{L}\left\{ \left(\frac{\cos\big(\frac{n\pi x}{L}\big)}{\frac{n\pi}{L}} \right|_{-L}^{0} + \left(-\frac{\cos\big(\frac{n\pi x}{L}\big)}{\frac{n\pi}{L}} \right|_{0}^{L} \right\} \\ &= \frac{1}{n\pi}\{(1-(-1)^n) + (1-(-1)^n)\} \\ &= \frac{2}{n\pi}(1-(-1)^n) \\ b_n &= \begin{cases} \frac{4}{n\pi}, & n = \text{odd} \\ 0, & n = \text{even} \end{cases} \end{aligned}$$

3.3 Physics

$$i\hbar\frac{\partial \Psi}{\partial t} = -\frac{\hbar^2}{2m}\nabla^2\Psi + V(x)\Psi \tag{1}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4}T_{\mu\nu} \tag{2}$$

$$\rho\left(\frac{\partial \vec{\mathbf{v}}}{\partial t} + \vec{\mathbf{v}} \cdot \boldsymbol{\nabla}\vec{\mathbf{v}}\right) = -\boldsymbol{\nabla}p + \boldsymbol{\nabla} \cdot \boldsymbol{\tau} + \mathbf{f} \tag{3}$$

$$(i\hbar\gamma^\mu\partial_\mu - mc)\psi(x) = 0 \tag{4}$$

4 Table

Raptorial (Spoons)	Prey consumed by Predator						
	1	2	3	4	5	6	7
Prey 1: White Bean	6	3	0	0	0	0	0
Prey 2: Black Bean	3	7	0	0	0	0	0
Prey 3: Pasta	4	1	5	6	6	7	8
Total:	0 (Poisoned)	11	5	6	6	7	8

5 Bibliography