National Workshop on Typing Scientific Documents in LaTeX (WTSDL 2019) August 09-10, 2019 Practice Session

Mr. XYZ

August 8, 2019

Practice 1.

$A = \{(x, y, z) \in \mathbb{R}^3 \mid 2x + 3y - z = 1$

Practice 2.

$f(x) = x^2 + 2x + c$

Practice 3.

$$\frac{d^2y}{dx^2} + 3\frac{dy}{dx} + 2y = x^2 \cos x$$

Practice 4.

$$\frac{x}{x+1} + \frac{x+2}{x} = \frac{x-1}{x+3}$$

Practice 5.

$$f(x) = \begin{cases} Red, & \text{if } x \in [a, b] \\ Green, & \text{if } x \in [b, c] \\ Black, & \text{otherwise} \end{cases}$$

Practice 6.

$$f(x) = \begin{cases} \text{Red}, & \text{if } x \in [a,b] \\ \text{Green}, & \text{if } x \in [b,c] \\ \text{Black}, & \text{otherwise} \end{cases}$$

Practice 7.

$$A = \begin{bmatrix} is & have & come & ? \\ ? & had & came & went \end{bmatrix}$$

Practice 8.

$$A = \begin{array}{|c|c|c|} \hline \text{is} & \text{have} & \text{come} \\ \hline \text{was} & \text{had} & \text{came} \\ \hline \end{array}$$

Practice 9.

$$A = \begin{pmatrix} 1 & 1 & 1 & \cdots & 1 \\ 1 & 1 & 1 & \cdots & 1 \\ \cdot & \cdot & \cdot & \cdots & \cdot \\ \cdot & \cdot & \cdot & \cdots & \cdot \\ 1 & 1 & 1 & \cdots & 1 \end{pmatrix}$$

Practice 10.

$$\int_0^1 (\tfrac{e^x}{e^x+1} + \cos x)dx$$

1 Practice 11.

$$\int_0^1 \left(\frac{e^x}{e^x+1} + \cos x \right) dx$$

Practice 12.

$$\left[2 \times \left\{ \left(\tfrac{2}{3} - 2 \right) - 3 \right\} - 3 \right]$$

Practice 13.

Solve the system of equations:

$$\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = xy, \tag{1}$$

$$\frac{\partial u}{\partial x} = 2\frac{\partial u}{\partial x}, \tag{2}$$

subject to the conditions $u(x,0) = u(y,0) = 2$.