

A Latex document

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1 Text in bold

Hello world!

2 Text in Italic

Hello world!

3 Text in color

Hello world!

- Formatting text with Latex;
- Trying a few commands

Figure 1 was borrowed from MathCentre and Table 1 was created after the SMSN website.

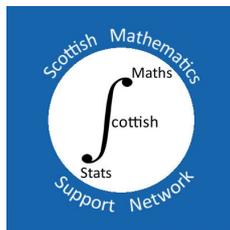


Figure 1: Creative Common Symbol

Table 1: Members of the SMSN committee

| Surname | Name | Role |
|-----------|----------|------------------|
| Macdonald | Callum | Chair |
| Durkacz | Kate | Treasurer |
| Ahmed | Shazia | Secretary |
| Davidson | Peter | Committee Member |
| Richard | Morgiane | Committee Member |

4 Writing Mathematics

The equation:

$$ax^2 + bx + c = 0$$

has 2 solutions $x_1 = \frac{-b + \sqrt{b^2 - 4 \cdot a \cdot c}}{2a}$ and $x_2 = \frac{-b - \sqrt{b^2 - 4 \cdot a \cdot c}}{2a}$.

The following equations:

$$\frac{dy}{dx} + 3y = e^x \tag{1}$$

$$\frac{d^2y}{dx^2} + 5\frac{dy}{dx} + 2y = (x - 1)^2 \tag{2}$$

are ordinary differential equations. Equation 1 is an ODE of the first order and Equation 2 is an ODE of the second order.

The matrix of following system of equations:

$$\begin{cases} x - 3y + 4z = 5 \\ 2x + y + z = 3 \\ 4x + 3y + 5z = 1 \end{cases}$$

is:

$$\begin{pmatrix} 1 & -3 & 4 \\ 2 & 1 & 1 \\ 4 & 3 & 5 \end{pmatrix}$$

The identity matrix, in any dimension, has the form:

$$\begin{pmatrix} 1 & 0 & \dots & 0 \\ 0 & 1 & \dots & 0 \\ \vdots & \vdots & \ddots & \vdots \\ 0 & \dots & \dots & 1 \end{pmatrix}$$