LaTeXDemo

Statistical Computing

March 3, 2020

1. itemize and enumerate
2. array, pmatrix and cases
3. math mode
4. align
5. tabular and graphic

itemize and enumerate

By itemize,

- abc
- def
- ghi

By enumerate,

1. abc
2. def
3. ghi

array, pmatrix and cases

By array,

$$\begin{pmatrix} 1 & 2 & 3 & 1 & 2 & 3 \\ 4 & 5 & 6 & 4 & 5 & 6 \\ 7 & 8 & 9 & 7 & 8 & 9 \end{pmatrix}$$

By pmatrix,

$$\begin{pmatrix} 1 & 2 & 3 & 1 & 2 & 3 \\ 4 & 5 & 6 & 4 & 5 & 6 \\ 7 & 8 & 9 & 7 & 8 & 9 \end{pmatrix}$$

By array,

$$|x| = \begin{cases} x, & \text{if } x \geq 0 \\ -x, & \text{if } x < 0 \end{cases}$$

By cases,

$$|x| = \begin{cases} x, & \text{if } x \geq 0 \\ -x, & \text{if } x < 0 \end{cases}$$

math mode

- $\alpha, \beta, \gamma, \Gamma, \zeta, \eta, \sigma, \Sigma$
- $\lim_{x \to a} f(x)$
- $f'(x)$
- $\int_a^b f(x)dx$
- $\sqrt{x^2 + 3}$
- $\sin, \cos, \log, \ln$
- $\dfrac{x - 1}{x + 1}$

align

$$\alpha = a + b - c \tag{1}$$
$$\beta = 2c \tag{2}$$

$$\begin{aligned} \alpha &= a + b - c \\ &= 2c \\ &= 5 \end{aligned}$$

$$\begin{aligned} \alpha &= a + b - c \\ \beta &= 2c \end{aligned} \tag{3}$$

tabular and graphic

Jan.	Feb.	Mar.
2	0	3
1	4	7

Figure: 國立清華大學