

TA class for math formula writing

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How to write math in Markdown/R markdown?

display formulas

```
$$f(x;\mu,\sigma^2) = \frac{1}{\sigma\sqrt{2\pi}} \exp\left\{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2\right\} \tag{1}$$
```

this is a display formula example

$$f(x; \mu, \sigma^2) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2} \quad (1)$$

where μ is the mean value, σ^2 is standard deviation.

inline formulas

```
$x_{11}^4=\sum_{i=1}^ny_i$
```

this is a inline formula example $x_{11}^4 = \sum_{i=1}^n y_i$

use “\” before alphabet

```
$_alpha$ $_beta$ $_omega$
```

$\alpha \beta \omega$

Superscripts and Subscripts

```
$x_i^2$:$x_i^2$ $\log_2 x$:$\log_2 x$ $10^{10}$:$10^{10}$
```

```
$10^{-10}$
```

```
$x_i^{-2}$
```

```
:$x_i^{-2}$ $x_{i^2}$:$x_{i^2}$
```

brackets

```
$_{1+2}$:$\{1+2\}$
```

calculation

-fraction formula: $\frac{3}{4}$

-sum formula: \sum_1^n

-integration formula: \int_1^n

-limit formula: \int_1^n

-matrix formula, use “&” to distinguish each element and use“\\” to jump to a new line: $\begin{matrix} 1 & x & x^2 \\ 1 & y & y^2 \\ 1 & z & z^2 \end{matrix}$

$$\begin{matrix} 1 & x & x^2 \\ 1 & y & y^2 \\ 1 & z & z^2 \end{matrix}$$