TA class for math formula writing

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How to write math in Markdown/R markdown?

display formulas

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

this is a display formula example

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

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

inline formulas

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

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

use "\" before alphabet

```
$\alpha$ $\beta$ $\omega$
```

α β ω

Superscripts and Subscripts

- `$x_i^2$`:x_i^2
- `$\log_2 x$`:$\log_2 x$
- `$10^10$`: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: `$\frac{}{}$` : $\frac{3}{4}$

-sum formula: `$\sum_1^n$`: $\sum_1^n$

-integration formula: `$\int_1^n$`: $\int_1^n$

-limit formula: `$\int_1^n$`: $\int_1^n$

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

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