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# Display style in math mode

Some mathematical elements change their style depending on the context, whether they are part of the text or in a equation-type environment. This article explains how to manually adjust the display style.

### Introduction

Let's see an example

Depending on the value of x the equation  $(f(x) = \sum_{i=0}^{n} \frac{i=0}{n} \frac{1+x}{i}$ may diverge or converge.

 $[f(x) = \sum_{i=0}^{n} \frac{1+x}{i}$ 

Depending on the value of x the equation  $f(x) = \sum_{i=0}^{n} \frac{a_i}{1+x}$  may diverge or converge.

$$f(x) = \sum_{i=0}^{n} \frac{a_i}{1+x}$$

Superscripts, subscripts and fractions are formatted differently.

Open an example in ShareLaTeX

## Setting mathematical styles

The maths styles can be set explicitly. For instance, if you want an in-line mathematical element to display as a equation-like element put \displaystyle before that element. There are some more maths stylerelated commands that change the size of the text.

In-line maths elements can be set with a different style: (f(x) = displaystyle) $\frac{1}{1+x}$ ). The same is true the other way around: \begin{eqnarray\*} \begin{eqnarray\*}  $f(x) = \sum_{i=0}^{n} \frac{1+x}{1+x}$ \textstyle  $f(x) = \text{\sum}_{i=0}^{n} \operatorname{\frac}_{a_i}_{1+x} \$ \scriptscriptstyle  $f(x) = \criptscriptstyle \sum_{i=0}^{n} \frac{a_i}{1+x}$ \end{eqnarray\*}

> In-line maths elements can be set with a different style:  $f(x) = \frac{1}{1+x}$ . The same is true the other way around:

$$f(x) = \sum_{i=0}^{n} \frac{a_i}{1+x}$$

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Open an example in ShareLaTeX

## Further reading

For more information see

\end{eqnarray\*}

- Mathematical expressions
- Subscripts and superscripts
- Aligning equations with amsmath • Spacing in math mode

• The not so short introduction to LATEX  $2_{\mathcal{E}}$ 

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