

# How to write $\forall \omega \in \mathbb{S}^0 \exists$

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## Proof of awesome unicoding

The nessecary code you need at the top is:

```
\usepackage[mathletters]{ucs}
\usepackage[utf8x]{inputenc}
```

Then write away!!!!!!

$$P(|X_{n,j}| \geq \epsilon) = P\left(|X_{n,j}| \geq \sigma_{n,j} \frac{\epsilon}{\sigma_{n,j}}\right) \leq \frac{\sigma_{n,j}^2}{\epsilon^2} = \frac{1}{\epsilon^2} \int_{-\infty}^{\infty} X^2 dF_{n,j}(X) \leq \frac{1}{\epsilon^2} \sum_{i=1}^{k_n} \int_{|X| \geq \eta} X^2 dF_{n,j}(X) \rightarrow 0$$

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$$\begin{aligned} P(|X_{n,j}| \geq \varepsilon) &= P(|X_{n,j}| \geq \sigma_{n,j} \varepsilon / \sigma_{n,j}) \\ &\leq (\sigma_{n,j} / \varepsilon)^2 \\ &= (1/\varepsilon)^2 \int_{-\infty}^{\infty} X^2 dF_{n,j}(X) \\ &\leq (1/\varepsilon)^2 \sum_{j=1}^{k_n} \int_{|X| \geq \eta} X^2 dF_{n,j}(X) \\ &\rightarrow 0 \end{aligned}$$

Above we show three equations.

- The first has math symbols written like this:  $\sigma$ ,  $\epsilon$ ,  $\int$ , and  $\rightarrow$ .
- The second has math symbols written like this:  $\sigma$ ,  $\varepsilon$ ,  $\int$ , and  $\rightarrow$ .
- Or equivalently like this:  $\sigma$ ,  $\varepsilon$ ,  $\int$ , and  $\rightarrow$ .
- Third is a mix: all unicode except for  $\sum_{j=1}^{k_n}$  versus  $\Sigma_{j=1}^{k_n}$ .

You can even use unicode in R! (or emails, markdown...)

A website with math entries to copy paste:

<http://symbolcodes.tlt.psu.edu/bylanguage/mathchart.html>

Use autohotkey on windows; typinator (or the cheaper type4me) on mac. The mac options cost money... but you don't care... you have a mac  $\therefore$  you care about money slightly less than lenovo users + way less than any other user.