This is my first Latex Doc.

in meadle

$$(x+1)^2 * 1222/12$$

in beginning  $(x+1)^2 * 1222/12$  $\operatorname{subscib}$ 

 $x_1$ 

 $\operatorname{subscib}$ 

 $x_{1111}$ 

greek letters

 $\pi$ 

 $\alpha$ 

$$A = \pi r^2$$

other funcs

 $y = \sin x$ 

log

 $log_5x$ 

lnx

different roots

 $\sqrt{2}$ 

 $\sqrt[2]{2}$ 

 $\sqrt[3]{12 + \sin x}$ 

fraction

 $\frac{12}{\sqrt{12+\pi}}$ 

$$\begin{split} r_t &= 0.034 r_{t-1} + 0.0075 + \hat{a}_t, where \\ \hat{a}_t &= \hat{\sigma}_t \epsilon_t and 1111 \\ \hat{\sigma}_t^2 &= 0.0000794 + 0.122 \hat{a}_{t-1}^2 + 0.855 \hat{\sigma}_{t-1}^2 \end{split}$$