LAB PRGM-7

Develop a LaTeX script to create a document that consists of the following two mathematical equations

$$
\begin{aligned}
x &= \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \\
&= \frac{-2 \pm \sqrt{2^2 - 4 \cdot (1) \cdot (-8)}}{2 \cdot 1} \\
&= \frac{-2 \pm \sqrt{4 + 32}}{2}
\end{aligned}
\qquad
\begin{aligned}
\varphi_\sigma^\lambda A_t &= \sum_{\pi \in C_t} \operatorname{sgn}(\pi) \varphi_\sigma^\lambda \varphi_\pi^\lambda \\
&= \sum_{\tau \in C_{\sigma t}} \operatorname{sgn}(\sigma^{-1} \tau \sigma) \varphi_\sigma^\lambda \varphi_{\sigma^{-1} \tau \sigma}^\lambda \\
&= A_{\sigma t} \varphi_\sigma^\lambda
\end{aligned}
$$

```
\documentclass{article}
\usepackage{amsmath, amssymb}
\renewcommand{\baselinestretch}{3}
\thispagestyle{empty}
\begin{document}
\begin{equation*}
\begin{aligned}
&\begin{aligned}
x &= \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \\
&= \frac{-2 \pm \sqrt{2^2 - 4(1)(-8)}}{2 \times 1} \\
&= \frac{-2 \pm \sqrt{4 + 32}}{2}
\end{aligned}
\quad \quad
&\begin{aligned}
\varphi_\sigma^\lambda A_t &= \sum_{\pi \in C_t} \text{sgn}(\pi) \varphi_\sigma^\lambda
\varphi_\pi^\lambda \\
&= \sum_{\tau \in C_{\sigma t}} \text{sgn}(\sigma^{-1} \tau \sigma) \varphi_\sigma^\lambda
\varphi_{\sigma^{-1} \tau \sigma}^\lambda \\
&= A_{\sigma t} \varphi_\sigma^\lambda
\end{aligned}
\end{aligned}
\end{equation*}
\end{document}
```

OUTPUT:

$$x = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$$

$$= \frac{-2 \pm \sqrt{2^2-4\cdot(1)\cdot(-8)}}{2\cdot 1}$$

$$= \frac{-2 \pm \sqrt{4+32}}{2}$$

$$\varphi_\sigma^\lambda A_t = \sum_{\pi \in C_t} \operatorname{sgn}(\pi)\varphi_\sigma^\lambda \varphi_\pi^\lambda$$

$$= \sum_{\tau \in C_{\sigma t}} \operatorname{sgn}(\sigma^{-1}\tau\sigma)\varphi_\sigma^\lambda \varphi_{\sigma^{-1}\tau\sigma}^\lambda$$

$$= A_{\sigma t}\varphi_\sigma^\lambda$$