The "shows" operator represents sequent judgment (turnstile).

In sequent calculus, "Gamma shows Delta" means "from context Gamma, we can derive Delta".

Simple sequent judgment:

$Gamma \vdash Delta$
More concrete example with specific propositions:

$(\mathbb{P} \wedge Q) \vdash \mathbb{P}$
Sequent with multiple context items (using sets):

$\{\mathbb{P}, \mathbb{P} \Rightarrow Q\} \vdash Q$
We can use shows in inference rules to represent natural deduction:

$$\frac{Gamma \vdash \mathbb{P} \qquad Gamma \vdash (\mathbb{P} \Rightarrow Q)}{Gamma \vdash Q}$$ modus ponens $\in$ sequent form

Combining shows with inference rules for natural deduction style:

$$\frac{Gamma \vdash A \qquad Gamma \vdash B}{Gamma \vdash (A \wedge B)}$$ conjunction introduction

The shows operator renders as the turnstile symbol in LaTeX.