

# Laws of the Logic of Bunched Implications in Iris

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First of all, the entailment relation  $\vdash$  is a preorder, giving us the reflexivity and transitivity laws

$$P \vdash P, \quad \frac{P \vdash Q \quad Q \vdash R}{P \vdash R}.$$

Pure propositions have the straightforward introduction and elimination rules

$$\frac{\varphi}{P \vdash \ulcorner \varphi \urcorner}, \quad \frac{\varphi \Rightarrow (True \vdash P)}{\ulcorner \varphi \urcorner \vdash P}.$$

The usual rules apply for standard conjunction, disjunction, and implication: