

Rules for \vee

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$$\frac{\psi}{\phi \vee \psi} \vee\text{I}$$

If you derive a formula, you can always add a disjunct to it.

Rules for \vee

$$\frac{\phi}{\phi \vee \psi} \vee\text{I}$$

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$$\frac{\begin{array}{cc} [\phi]^i & [\psi]^i \\ \cdot & \cdot \\ \cdot & \cdot \\ \cdot & \cdot \\ \phi \vee \psi & \sigma \quad \sigma \end{array}}{\sigma} \vee\text{E}^i$$

If you derive a formula, you can always add a disjunct to it.

This formalizes **proof by cases**

On Rule $\vee E$

	$[\phi]^i$	$[\psi]^i$
	.	.
	.	.
	.	.
$\phi \vee \psi$	σ	σ
<hr/>		
		$\vee E^i$
	σ	

If by assuming ϕ , one can derive σ , and by assuming ψ , one can also derive σ , then one can derive σ from $\phi \vee \psi$.