

Zeroth-order logic tableau rule sheet

Peter Susanszky: Learning Logic Backwards

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|----|--------------|------------|
| 1. | $X \wedge Y$ | |
| 2. | X | $\wedge 1$ |

\wedge : Conjunction rule

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|----|------------------|---------------|
| 1. | $\neg(X \vee Y)$ | |
| 2. | $\neg X$ | $\neg \vee 1$ |

$\neg \vee$: Negated disjunction rule

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|----|-------------------------|----------------------|
| 1. | $\neg(X \rightarrow Y)$ | |
| 2. | X | $\neg \rightarrow 1$ |

$\neg \rightarrow$: Negated conditional rule

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|----|-------------|----------|
| 1. | $X \vee Y$ | |
| 2. | $X \quad Y$ | $\vee 1$ |

\vee : Disjunction rule

| | | |
|----|-----------------------|-----------------|
| 1. | $\neg(X \wedge Y)$ | |
| 2. | $\neg X \quad \neg Y$ | $\neg \wedge 1$ |

$\neg \wedge$: Negated conjunction rule

| | | |
|----|-------------------|-----------------|
| 1. | $X \rightarrow Y$ | |
| 2. | $\neg X \quad Y$ | $\rightarrow 1$ |

\rightarrow : Conditional rule

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|----|---------------|---------------|
| 1. | $\neg \neg X$ | |
| 2. | X | $\neg \neg 1$ |

$\neg \neg$: Double negation rule