

REGLAS DE INFERENCIA BÁSICAS

Ponendo ponens

$$\begin{array}{l} P \rightarrow Q \\ P \\ \hline \therefore Q \end{array}$$

Tolendo tofens

$$\begin{array}{l} P \rightarrow Q \\ \neg Q \\ \hline \therefore \neg P \end{array}$$

Tolendo ponens

$$\begin{array}{l} P \vee Q \\ \neg P \quad \neg Q \\ \hline \therefore Q \quad \therefore P \end{array}$$

Slogismo hipotético

$$\begin{array}{l} P \rightarrow Q \\ Q \rightarrow S \\ \hline \therefore P \rightarrow S \end{array}$$

Dilema constructivo

$$\begin{array}{l} P \vee Q \\ P \rightarrow S \\ Q \rightarrow R \\ \hline \therefore S \vee R \end{array}$$

Dilema destructivo

$$\begin{array}{l} \neg S \vee \neg R \\ P \rightarrow S \\ Q \rightarrow R \\ \hline \therefore \neg P \vee \neg Q \end{array}$$

Adyunción

$$\begin{array}{l} P \\ Q \\ \hline \therefore P \wedge Q \end{array}$$

Simplificación

$$\begin{array}{l} P \wedge Q \\ \hline \therefore P \\ \hline \therefore Q \end{array}$$

Doble negación

$$\begin{array}{l} \neg \neg P \\ \hline \therefore P \end{array}$$

Ley de Morgan

$$\begin{array}{l} P \wedge Q \\ \hline \therefore \neg(\neg P \vee \neg Q) \end{array}$$

Ley de adición

$$\begin{array}{l} P \\ \hline \therefore P \vee X \end{array}$$