

Slutledningsregler

Modus (ponendo) ponens (MP)

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

Modus tollendo tollens (MTT)

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

Modus tollendo ponens (MTP)

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

Introduktionsregler (I)

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

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

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

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

Elimineringsregler (E)

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

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

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

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

regeln för villkorligt bevis

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

regeln för indirekt bevis

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

hypotetiska syllogismregeln

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

disjunktiva syllogismregeln

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

De Morgans regler (DM)

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

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

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

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

Kommutativa regler

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

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