6) (i) Absurdo clásico

$$\dfrac{\dfrac{\dfrac{}{\neg\neg w \vdash \neg\neg w}\,ax \quad \dfrac{}{\neg w \vdash \neg w}\,ax}{\neg\neg w, \neg w \vdash \bot}\,\neg e}{\neg w \vdash \neg w}\,PBC \qquad \dfrac{\neg w \vdash \neg w}{\vdash \neg w \to \neg w}\,\to i$$

(ii) Ley de Peirce

$$\dfrac{\dfrac{\dfrac{\dfrac{}{\Gamma, p \vdash p}\,ax}{\Gamma \vdash p \to p}\,\to i \quad \dfrac{}{\Gamma, \neg p \vdash \neg p}\,ax}{\Gamma, \neg p \vdash \neg(p \to p)}\,\to e}{\Gamma \vdash p \to p}\,PBC \qquad \dfrac{\Gamma \vdash p \to p}{\vdash (p \to p) \to (p \to p)}\,\to i$$

(iii) Tercero excluido odio tau.

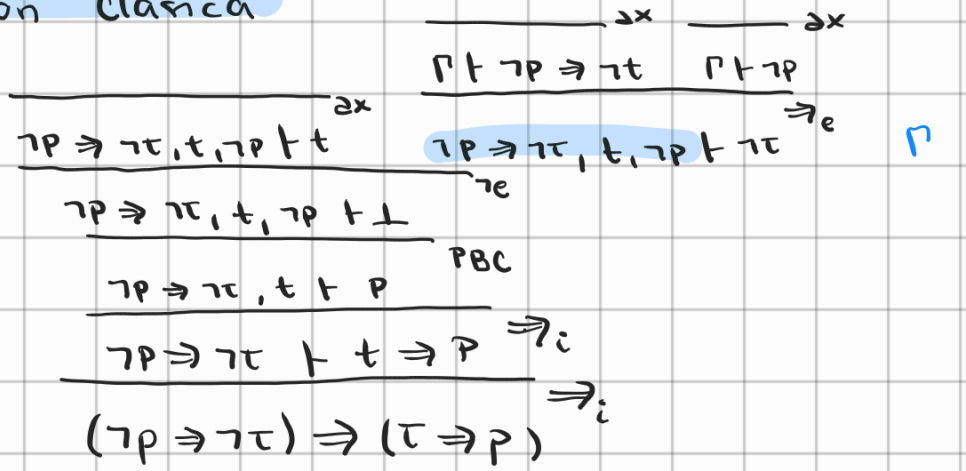
$$\dfrac{\dfrac{\dfrac{}{\neg(p \vee \neg p), \neg p \vdash \neg(p \vee \neg p)}\,ax \quad \dfrac{}{\neg(p \vee \neg p), \neg p \vdash p}\,ax}{\neg(p \vee \neg p), \neg p \vdash \bot}\,\neg e}{\neg(p \vee \neg p) \vdash \neg\neg p}\,\neg i \quad \dfrac{}{\neg(p \vee \neg p) \vdash \neg p}\,ax}{\neg(p \vee \neg p) \vdash \bot}\,\neg e \qquad \dfrac{\neg(p \vee \neg p) \vdash \bot}{\vdash p \vee \neg p}\,PBC$$

Por ej. $\neg(p \wedge q) \equiv \neg p \vee \neg q$ (De Morgan y doble $\neg$)

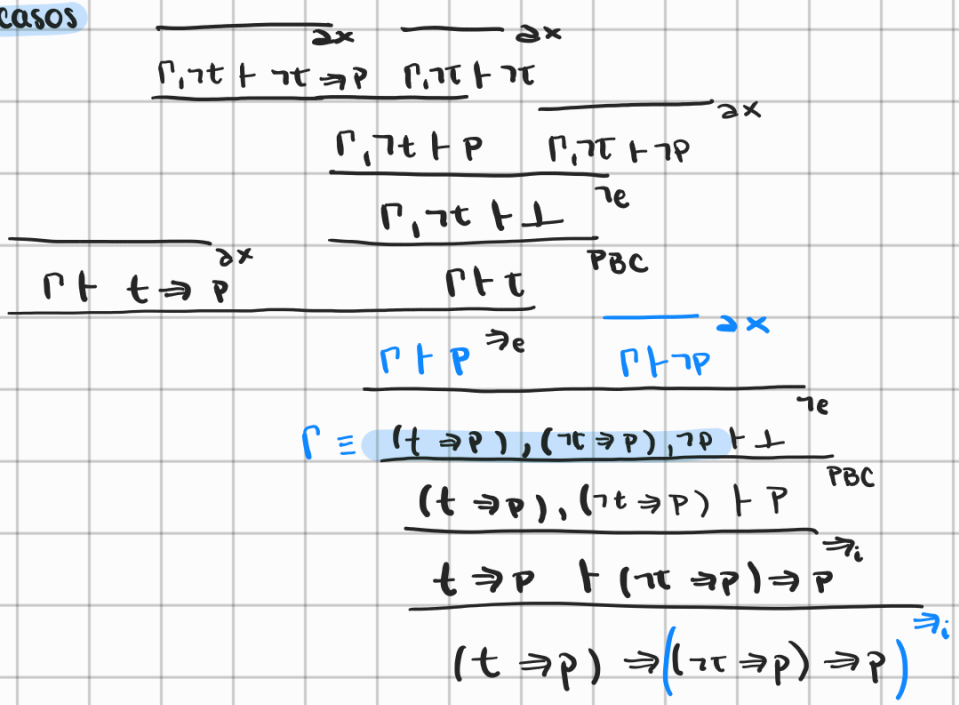
(iv) Consecuencia milagrosa

$$\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{}{\Gamma \vdash \Gamma}\,ax \quad \dfrac{}{\Gamma \vdash \Gamma}\,ax}{\Gamma \vdash \Gamma}\,\to e \quad \dfrac{}{\Gamma, \Gamma \vdash \Gamma}\,ax}{\Gamma, \Gamma \to \Gamma \vdash \Gamma}\,\to e}{\Gamma \vdash \Gamma}\,PBC}{\vdash \Gamma \to \Gamma}\,\to i$$

(V) Contraposición clásica



(VI) Análisis de casos



(VII) Implicación vs. disyunción

(1) $(t \Rightarrow p) \Rightarrow (\neg t \vee p)$

(2) $(\neg t \vee p) \Rightarrow (t \Rightarrow p)$