

TD 5 (bis). CALCUL NATUREL

Exercice 1: Prouvez que :

1. $A \Rightarrow (B \Rightarrow C) \quad \vdash_N \quad A \wedge B \Rightarrow C$
2. $A \wedge (B \vee C) \quad \vdash_N \quad (A \wedge B) \vee (A \wedge C)$
3. $A \Rightarrow B \quad \vdash_N \quad \neg A \vee B$
4. $A \Rightarrow B \quad \vdash_N \quad \neg B \Rightarrow \neg A$
5. $\neg A, A \vee B \quad \vdash_N \quad B$
6. $\neg A \wedge \neg B \quad \vdash_N \quad \neg(A \vee B)$
7. $\vdash_N \quad (A \Rightarrow (B \Rightarrow C)) \Rightarrow ((A \Rightarrow B) \Rightarrow (A \Rightarrow C))$

Exercice 2: Prouvez que :

1. $a \quad \vdash_N \quad \neg\neg a$
2. $\vdash_N \quad a \vee \neg a$