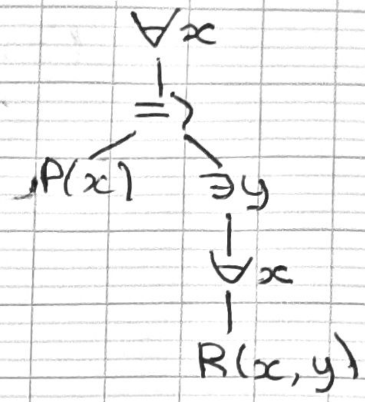
Exercice 4



1) $\forall x.\ P(x) \Rightarrow \exists y.\ \forall \overset{z}{x}.\ R(x,y)$

$\equiv \forall x.\ \exists y.\ P(x) \Rightarrow \forall z.\ R(z,y)$

$\equiv \forall x.\ \exists y.\ \forall z.\ P(x) \Rightarrow R(z,y)$

$\equiv \forall x.\ \exists y.\ \forall z\ \neg P(x) \vee R(z,y)$

(forme de Skolem) $Sk(F') = \neg P(x) \vee R(z, f_y(x))$

Forme Clausale $\rightarrow FC(Sk(F')) = \{\{\neg P(x), R(z, f_y(x))\}\}$

2) $(\exists x.\ \forall y.\ R(x,y)) \Rightarrow \forall y.\ \exists x.\ R(x,y)$ (formule non polie)

$\equiv (\exists x.\ \forall y.\ R(x,y)) \Rightarrow \forall z.\ \exists w\ R(w,z)$

$\equiv \forall x.\ \exists y.\ \forall z.\ \exists w\ (R(x,y) \Rightarrow R(w,z))$

$\equiv \forall x.\ \exists y.\ \forall z.\ \exists w\ \neg R(x,y) \vee R(w,z) = F'$

$Sk(F') = \neg R(x, f_y(x)) \vee R(f_w(x,z), z)$

Si on fait la version de David, on trouverais (avec algo Skolem, Herbra

$Sk(F) = R(x, f_y(x)) \Rightarrow R(f_w(z), z)$ (à vérifier)