Exercice 8

① $\forall x \ (O(x) \Rightarrow I(x)) \land \neg (\forall y (I(y) \Rightarrow O(y)))$

② $\forall x \ (f(x,d) = x \land f(d,x) = x)$

③ $\forall x \ \neg (\neg E(x) \land I(x))$

④ $\neg \exists x \ \forall y \ S(x,y)$

⑤ $\forall x \ \forall y \ \left(E(x) \land E(y) \right.$

$\left(S(x,y) \Leftrightarrow \exists z \ \exists w \left(I(z) \land \right.\right.$

$f(z,w) = d \ \land \quad x = f(f(z,y), w)))$