

## Homework 2

### Reading

Please read chapter 3 in the Thompson book

### Exercises

1. Find the realizer for each of these propositions:

(a)  $((A \& B) \Rightarrow C) \Rightarrow A \Rightarrow (B \Rightarrow C)$  (*Currying*)

(b)  $(\exists x.A(x) \vee \exists x.B(x)) \Rightarrow \exists x.(A(x) \vee B(x))$

(c) Do the reverse of (b), i.e.  $\Leftarrow$

(d)  $\exists x.A(x) \Rightarrow \sim \forall x. \sim A(x)$

(e)  $\exists x. \sim A(x) \Rightarrow \sim \forall x.A(x)$

2. Translate the following argument into a propositional formula:

If either wages or prices are raised, there will be inflation. If there is inflation then either Congress must regulate it or the people will suffer. But if the people suffer then congressmen will be unpopular. However, Congress does not regulate inflation and congressmen are not unpopular. Therefore, wages do not rise.