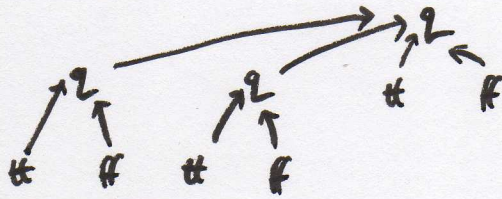


TD 2

Arènes

• $\text{bool}^2 \Rightarrow \text{bool}$



O
P
O

$\text{bool} \Rightarrow (\text{bool} \Rightarrow \text{bool})$ the same!

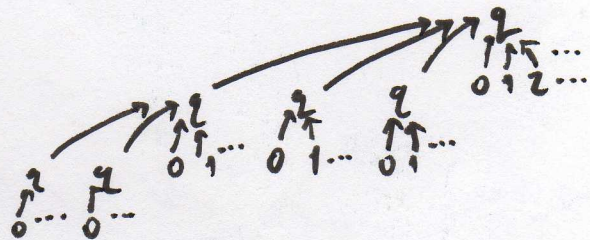
• $\text{bool} \Rightarrow \text{bool}^2$



O
P
O

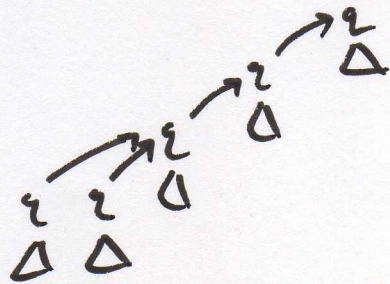
not a tree — a DAG

• $(\text{nat}^2 \Rightarrow \text{nat}) \times \text{nat}^2 \Rightarrow \text{nat}$



O
P
O
P

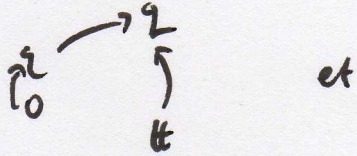
• $((\text{nat} \Rightarrow (\text{nat} \Rightarrow \text{nat})) \Rightarrow \text{nat}) \Rightarrow \text{nat}$



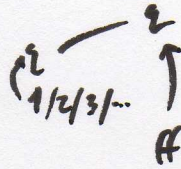
O
P
O
P
O

Strategies

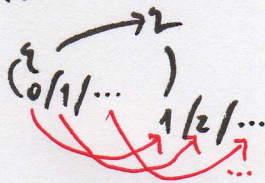
• zero! : $\text{nat} \Rightarrow \text{bool}$



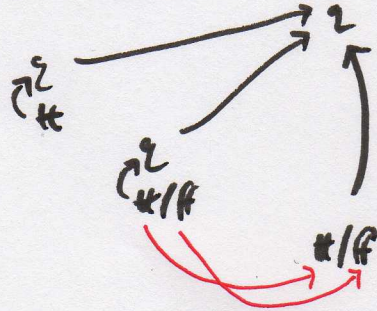
$\text{nat} \Rightarrow \text{bool}$



• Succ : $\text{nat} \Rightarrow \text{nat}$



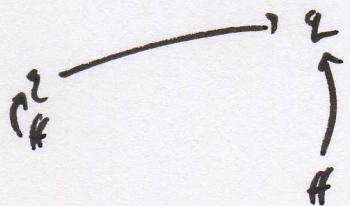
• etc_0 : $(\text{bool} \times \text{bool}) \Rightarrow \text{bool}$



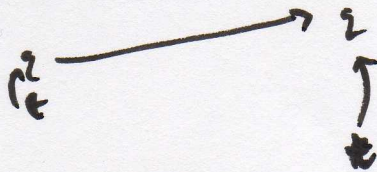
etc₀

$x, y : \text{bool} \vdash \text{if } x \text{ then } y$
 $\text{else } \text{ff} : \text{bool}$

et



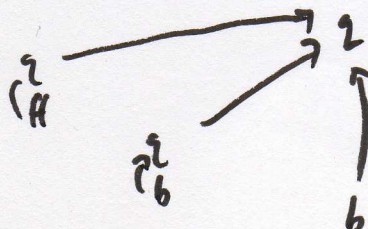
• out_0 : $(\text{bool} \times \text{bool}) \Rightarrow \text{bool}$



out₀

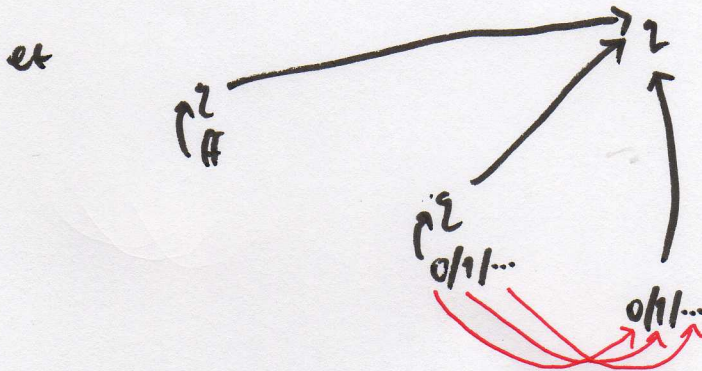
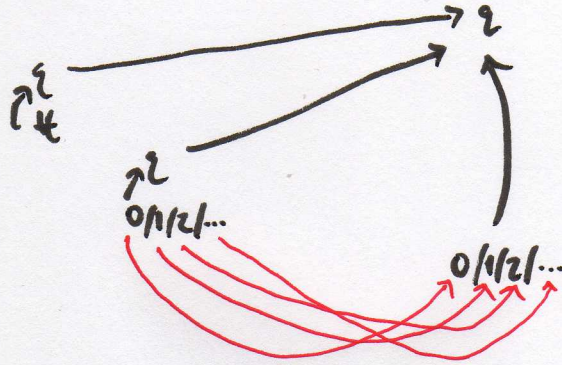
$x, y : \text{bool} : \text{if } x \text{ then } \text{tt}$
 $\text{else } y : \text{bool}$

et



$b \in \{\text{tt}, \text{ff}\}$

• if-then-else : $(\text{bool} \times \text{nat} \times \text{nat}) \Rightarrow \text{nat}$



Composition

