

# Example exercise 6

Tuesday, 28 April 2020

18.27

Using the SOS rules for TCCS prove that

$$\varepsilon(5).(\varepsilon(3).\text{Nil} + b.\text{Nil}) \xrightarrow{7} \varepsilon(1).\text{Nil} + b.\text{Nil}$$

*Solution:*

$$\begin{array}{c} \text{(DEL}_2\text{)} \frac{}{\varepsilon(3).\text{Nil} \xrightarrow{2} \varepsilon(1).\text{Nil}} \qquad \frac{}{b.\text{Nil} \xrightarrow{2} b.\text{Nil}} \text{(ACT}_d\text{)} \\ \text{(SUM}_d\text{)} \frac{}{\varepsilon(3).\text{Nil} + b.\text{Nil} \xrightarrow{2} \varepsilon(1).\text{Nil} + b.\text{Nil}} \\ \text{(DEL}_2\text{)} \frac{}{\varepsilon(5).(\varepsilon(3).\text{Nil} + b.\text{Nil}) \xrightarrow{7} \varepsilon(1).\text{Nil} + b.\text{Nil}} \end{array}$$