

$$\begin{array}{l}
 \text{fun } x \rightarrow x+1 \Rightarrow \text{fun } x \rightarrow x+1 \quad 2 \Rightarrow 2 \quad \frac{2 \Rightarrow 2 \quad 1 \Rightarrow 1 \quad 2+1 \Rightarrow 3}{2+1 \Rightarrow 3} \text{ (OP)} \\
 \text{first} = \text{fun } mbx \rightarrow \dots \quad \frac{[1] \Rightarrow [1] \quad (\text{fun } x \rightarrow x+1) 2 \Rightarrow 3}{(\text{fun } x \rightarrow x+1) 2 \Rightarrow 3} \text{ (List)} \\
 \text{first} \Rightarrow \text{fun } mbx \rightarrow (mb) :: x \quad \frac{(\text{fun } x \rightarrow x+1) 2 :: [1] \Rightarrow 3 :: [1]}{(\text{fun } x \rightarrow x+1) 2 :: [1] \Rightarrow 3 :: [1]} \text{ (App')} \\
 \text{first } (\text{fun } x \rightarrow x+1) 2 [1] \Rightarrow 3 :: [1] \\
 \text{first } \in (\text{fun } x \rightarrow x+1) 2 [1] = 3 :: [1]
 \end{array}$$