

6. Prove que $\text{rev}(\text{rev}(l)) = l$, $\forall l$.

Indagar em l.

- Se $l = \text{nil}$ então $\text{rev}(\text{rev}(l)) = \text{rev}(\text{rev}(\text{nil})) \stackrel{\text{def.}}{=} \text{rev}(\text{nil}) = \text{nil} = l$. ✓

- Se $l = h :: l'$ então $\text{rev}(\text{rev}(l)) = \text{rev}(\text{rev}(h :: l')) \stackrel{\text{def.}}{=} \text{rev}(\text{rev}(l') \circ (h :: \text{nil}))$
 $\stackrel{\text{ex. 5}}{=} \text{rev}(h :: \text{nil}) \circ \text{rev}(\text{rev}(l')) = (h :: \text{nil}) \circ \text{rev}(\text{rev}(l')) \stackrel{\text{h.i.}}{=} (h :: \text{nil}) \circ l' = h :: l' = l.$ □

$\uparrow$ def. em 2 passos. $\uparrow$ def. em 2 passos