I. Ann: $app\ (rev\ l1)\ l2 = app\_rev\ l1\ l2$ gilt für alle Listen $l1, l2$.
Wir zeigen dies über die Länge der Liste $l1$.

I. Anf: $app\ (rev\ [])\ l2 \overset{Def.}{=} app\ []\ l2 \overset{Def.}{=} l2 \overset{Def.}{=} app\_rev\ []\ l2$

I. Schritt: $l_1 = xs \Rightarrow l_1 = x :: xs$

I. Schluss: $app\ (rev\ (x::xs))\ l_2 \overset{Def.}{=} app\ (app\ (rev\ xs)\ [x])\ l_2$

$\overset{(1)}{=} app\ (rev\ xs)\ (app\ [x]\ l_2) \overset{Def.}{=} app\ (rev\ xs)\ (x :: app\ []\ l_2)$

$\overset{Def.}{=} app\ (rev\ xs)\ (x :: l_2) \overset{I.Ann.}{=} app\_rev\ xs\ (x :: l_2)$

$\overset{Def.}{=} app\_rev\ (x :: xs)\ l_2$ □