

fun-path-induction^{11,40}

$\forall T:\text{Type}, f:(T \rightarrow T), R:(T \rightarrow T \rightarrow (T \text{ List}) \rightarrow \mathbb{P}).$
 $(\forall x:T. R(x,x,[x]))$
 $\Rightarrow (\forall L:(T \text{ List}), x, y, z:T.$
 $(x = f(y) \Rightarrow (\neg(x = y)) \Rightarrow R(y,z,[y / L]) \Rightarrow R(x,z,[x; y / L]))$
 $\Rightarrow \{\forall L:(T \text{ List}), x, y:T. x=f*(y) \text{ via } L \Rightarrow R(x,y,L)\}$