414 Prove that

$$\forall\sigma, \sigma'\cdot\ t'{\ge}t \land \textbf{if } b \textbf{ then } P.\ \ t{:=}\ t{+}1.\ \ W \textbf{ else } ok \textbf{ fi} \ \Leftarrow\ W$$
$$\Leftarrow\quad \forall\sigma, \sigma'\cdot\ \textbf{while } b \textbf{ do } P \textbf{ od} \ \Leftarrow\ W$$

is equivalent to the **while** construction axioms, and hence that construction and induction can be expressed together as

$$\forall\sigma, \sigma'\cdot\ t'{\ge}t \land \textbf{if } b \textbf{ then } P.\ \ t{:=}\ t{+}1.\ \ W \textbf{ else } ok \textbf{ fi} \ \Leftarrow\ W$$
$$=\quad \forall\sigma, \sigma'\cdot\ \textbf{while } b \textbf{ do } P \textbf{ od} \ \Leftarrow\ W$$

no solution given