517 Here are two definitions.

$$
\begin{aligned}
A \;=\;& \textbf{if } \surd c \wedge \surd d \textbf{ then } c? \vee d? \\
& \textbf{else if } \surd c \textbf{ then } c? \\
& \quad \textbf{else if } \surd d \textbf{ then } d? \\
& \quad\quad \textbf{else if } \mathcal{T}c_{\mathbf{r}c} < \mathcal{T}d_{\mathbf{r}d} \textbf{ then } t := \mathcal{T}c_{\mathbf{r}c} + 1.\ c? \\
& \quad\quad\quad \textbf{else if } \mathcal{T}d_{\mathbf{r}d} < \mathcal{T}c_{\mathbf{r}c} \textbf{ then } t := \mathcal{T}d_{\mathbf{r}d} + 1.\ d? \\
& \quad\quad\quad\quad \textbf{else } t := \mathcal{T}c_{\mathbf{r}c} + 1.\ c? \vee d? \textbf{ fi fi fi fi fi} \\
B \;=\;& \textbf{if } \surd c \wedge \surd d \textbf{ then } c? \vee d? \\
& \quad \textbf{else if } \surd c \textbf{ then } c? \\
& \quad\quad \textbf{else if } \surd d \textbf{ then } d? \\
& \quad\quad\quad \textbf{else } t := t+1.\ B \textbf{ fi fi fi}
\end{aligned}
$$

Letting time be an extended natural, prove $A = B$.

no solution given