

518 Here are two definitions.

$$\begin{aligned} A &= \text{if } \sqrt{c} \wedge \sqrt{d} \text{ then } c? \vee d? \\ &\quad \text{else if } \sqrt{c} \text{ then } c? \\ &\quad \quad \text{else if } \sqrt{d} \text{ then } d? \\ &\quad \quad \quad \text{else if } \mathcal{I}_{rc} < \mathcal{I}_{rd} \text{ then } t := \mathcal{I}_{rc} + 1. c? \\ &\quad \quad \quad \quad \text{else if } \mathcal{I}_{rd} < \mathcal{I}_{rc} \text{ then } t := \mathcal{I}_{rd} + 1. d? \\ &\quad \quad \quad \quad \quad \text{else } t := \mathcal{I}_{rc} + 1. c? \vee d? \text{ fi fi fi fi fi} \\ B &= \text{if } \sqrt{c} \wedge \sqrt{d} \text{ then } c? \vee d? \\ &\quad \text{else if } \sqrt{c} \text{ then } c? \\ &\quad \quad \text{else if } \sqrt{d} \text{ then } d? \\ &\quad \quad \quad \text{else } t := t + 1. B \text{ fi fi fi} \end{aligned}$$

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

no solution given