

t110\_seq\_4 (TMJEBQ-  
woiU2vH5DsGt372wU8Wz6Lrd44xYv)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  be given. Let  $k14\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k23\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k22\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k19\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (\forall X2.(m2\_finseq\_2 \\ & X2 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (k22\_seq\_4 (k19\_seq\_4 X0 X1 X2) = \\ & k22\_seq\_4 (k19\_seq\_4 X0 X2 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 k1\_numbers) \Rightarrow (k23\_seq\_4 X0 X1 X2 = ReplSep (toset (\lambda X3 : \iota. \\ & m2\_finseq\_2 X3 k2\_numbers (k14\_seq\_4 X0))) (\lambda X3 : \iota. \neg r1\_xreal\_0 \\ & X2 (k22\_seq\_4 (k19\_seq\_4 X0 X3 X1))) (\lambda X3 : \iota. X3)))) \end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 k2\_numbers \\ & (k14\_seq\_4 X0)) \Rightarrow (\forall X3.(m2\_finseq\_2 X3 k2\_numbers (k14\_seq\_4 \\ & X0)) \Rightarrow ((X2 \in k23\_seq\_4 X0 X3 X1) \Leftrightarrow (\neg r1\_xreal\_0 X1 (k22\_seq\_4 (k19\_seq\_4 \\ & X0 X3 X2)))))) \end{aligned}$$