

t20\_prelamb  
 (TMHmNF7srgZiZ6fi39hrPMMyvHLYcuiUVy4e)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v10\_prelamb : \iota \Rightarrow o$  be given. Let  $l2\_prelamb : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r2\_prelamb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_prelamb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_prelamb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_prelamb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v10\_prelamb X0) \wedge (l2\_prelamb \\
 & \quad X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
 & \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((r2\_prelamb X0 (k12\_finseq\_1 \\
 & \quad (u1\_struct\_0 X0) X1) X2) \Rightarrow ((r2\_prelamb X0 (k6\_finseq\_1 (u1\_struct\_0 \\
 & \quad X0)) (k2\_prelamb X0 X2 X1)) \wedge (r2\_prelamb X0 (k6\_finseq\_1 (u1\_struct\_0 \\
 & \quad X0)) (k1\_prelamb X0 X1 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (l2\_prelamb X0)) \Rightarrow ((v10\_prelamb \\
& X0) \Leftrightarrow ((\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (r2\_prelamb \\
& X0 (k12\_finseq\_1 (u1\_struct\_0 X0) X1) X1)) \wedge ((\forall X1.(m2\_finseq\_1 \\
& X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r2\_prelamb \\
& X0 (k8\_finseq\_1 (u1\_struct\_0 X0) X1 (k12\_finseq\_1 (u1\_struct\_0 \\
& X0) X3)) X2) \Rightarrow (r2\_prelamb X0 X1 (k2\_prelamb X0 X2 X3)))))) \wedge ((\forall X1. \\
& (m2\_finseq\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\
& (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow \\
& ((r2\_prelamb X0 (k8\_finseq\_1 (u1\_struct\_0 X0) (k12\_finseq\_1 ( \\
& u1\_struct\_0 X0) X3) X1) X2) \Rightarrow (r2\_prelamb X0 X1 (k1\_prelamb X0 X3 X2)))))) \wedge \\
& ((\forall X1.(m2\_finseq\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.( \\
& m2\_finseq\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m2\_finseq\_1 X3 \\
& (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow \\
& (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\forall X6.(m1\_subset\_1 \\
& X6 (u1\_struct\_0 X0)) \Rightarrow (((r2\_prelamb X0 X1 X5) \wedge (r2\_prelamb X0 (k8\_finseq\_1 \\
& (u1\_struct\_0 X0) (k8\_finseq\_1 (u1\_struct\_0 X0) X2 (k12\_finseq\_1 \\
& (u1\_struct\_0 X0) X4)) X3) X6)) \Rightarrow (r2\_prelamb X0 (k8\_finseq\_1 (u1\_struct\_0 \\
& X0) (k8\_finseq\_1 (u1\_struct\_0 X0) (k8\_finseq\_1 (u1\_struct\_0 X0) \\
& X2 (k12\_finseq\_1 (u1\_struct\_0 X0) (k2\_prelamb X0 X4 X5))) X1) X3) \\
& X6)))))) \wedge ((\forall X1.(m2\_finseq\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ( \\
& \forall X2.(m2\_finseq\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m2\_finseq\_1 \\
& X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\forall X6. \\
& (m1\_subset\_1 X6 (u1\_struct\_0 X0)) \Rightarrow (((r2\_prelamb X0 X1 X5) \wedge (r2\_prelamb \\
& X0 (k8\_finseq\_1 (u1\_struct\_0 X0) (k8\_finseq\_1 (u1\_struct\_0 X0) \\
& X2 (k12\_finseq\_1 (u1\_struct\_0 X0) X4)) X3) X6)) \Rightarrow (r2\_prelamb X0 \\
& (k8\_finseq\_1 (u1\_struct\_0 X0) (k8\_finseq\_1 (u1\_struct\_0 X0) ( \\
& k8\_finseq\_1 (u1\_struct\_0 X0) X2 X1) (k12\_finseq\_1 (u1\_struct\_0 \\
& X0) (k1\_prelamb X0 X5 X4))) X3) X6)))))) \wedge ((\forall X1.(m2\_finseq\_1 \\
& X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m2\_finseq\_1 X2 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. \\
& (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 \\
& (u1\_struct\_0 X0)) \Rightarrow ((r2\_prelamb X0 (k8\_finseq\_1 (u1\_struct\_0 \\
& X0) (k8\_finseq\_1 (u1\_struct\_0 X0) (k8\_finseq\_1 (u1\_struct\_0 X0) \\
& X1 (k12\_finseq\_1 (u1\_struct\_0 X0) X3)) (k12\_finseq\_1 (u1\_struct\_0 \\
& X0) X4)) X2) X5) \Rightarrow (r2\_prelamb X0 (k8\_finseq\_1 (u1\_struct\_0 X0) ( \\
& k8\_finseq\_1 (u1\_struct\_0 X0) X1 (k12\_finseq\_1 (u1\_struct\_0 X0) \\
& (k3\_prelamb X0 X3 X4))) X2) X5)))))) \wedge ((\forall X1.(m2\_finseq\_1 \\
& X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m2\_finseq\_1 X2 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. \\
& (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (((r2\_prelamb X0 X1 X3) \wedge (r2\_prelamb \\
& X0 X2 X4)) \Rightarrow (r2\_prelamb X0 (k8\_finseq\_1 (u1\_struct\_0 X0) X1 X2) ( \\
& k3\_prelamb X0 X3 X4)))))))))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v10\_prelamb X0) \wedge (l2\_prelamb X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((r2\_prelamb X0 (k6\_finseq\_1 (u1\_struct\_0 X0)) (k2\_prelamb X0 X1 X1)) \wedge (r2\_prelamb X0 (k6\_finseq\_1 (u1\_struct\_0 X0)) (k1\_prelamb X0 X1 X1))))$$