

t32\_pcs\_0  
(TMQsF8LpgET9Ze5JY9VF7yKTy3Q84Eeqi2A)

October 27, 2020

Let  $v14\_pcs\_0 : \iota \Rightarrow o$  be given. Let  $l2\_pcs\_0 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k19\_pcs\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v13\_pcs\_0 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v6\_pcs\_0 : \iota \Rightarrow o$  be given. Let  $v12\_pcs\_0 : \iota \Rightarrow o$  be given. Let  $v4\_pcs\_0 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.((v13\_pcs\_0 X0) \wedge (l2\_pcs\_0 X0)) \Rightarrow (\forall X1.(\neg X1 \in u1\_struct\_0 X0) \Rightarrow (v13\_pcs\_0 (k19\_pcs\_0 X0 X1))) \quad (1)$$

Assume the following.

$$\forall X0.((v4\_orders\_2 X0) \wedge (l2\_pcs\_0 X0)) \Rightarrow (\forall X1.(\neg X1 \in u1\_struct\_0 X0) \Rightarrow (v4\_orders\_2 (k19\_pcs\_0 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1.((v6\_pcs\_0 X0) \wedge (l2\_pcs\_0 X0)) \Rightarrow ((v6\_pcs\_0 (k19\_pcs\_0 X0 X1)) \wedge (v12\_pcs\_0 (k19\_pcs\_0 X0 X1))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1.((v4\_pcs\_0 X0) \wedge (l2\_pcs\_0 X0)) \Rightarrow ((v4\_pcs\_0 (k19\_pcs\_0 X0 X1)) \wedge (v12\_pcs\_0 (k19\_pcs\_0 X0 X1))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1.((v3\_orders\_2 X0) \wedge (l2\_pcs\_0 X0)) \Rightarrow ((v3\_orders\_2 (k19\_pcs\_0 X0 X1)) \wedge (v12\_pcs\_0 (k19\_pcs\_0 X0 X1))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1.(l2\_pcs\_0 X0) \Rightarrow ((v12\_pcs\_0 (k19\_pcs\_0 X0 X1)) \wedge (l2\_pcs\_0 (k19\_pcs\_0 X0 X1))) \quad (6)$$

Assume the following.

$$\forall X0.(l2\_pcs\_0 X0) \Rightarrow (((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v4\_pcs\_0 X0) \wedge ((v6\_pcs\_0 X0) \wedge (v13\_pcs\_0 X0)))))) \Rightarrow (v14\_pcs\_0 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(l2\_pcs\_0 X0) \Rightarrow ((v14\_pcs\_0 X0) \Rightarrow ((v3\_orders\_2 X0) \wedge \\ ((v4\_orders\_2 X0) \wedge ((v4\_pcs\_0 X0) \wedge ((v6\_pcs\_0 X0) \wedge (v13\_pcs\_0 \\ X0)))))) \end{aligned} \quad (8)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v14\_pcs\_0 X0) \wedge (l2\_pcs\_0 X0)) \Rightarrow (\forall X1.(\neg X1 \in \\ u1\_struct\_0 X0) \Rightarrow ((v14\_pcs\_0 (k19\_pcs\_0 X0 X1)) \wedge (l2\_pcs\_0 (k19\_pcs\_0 \\ X0 X1)))) \end{aligned}$$