

# t53\_midsp\_1 (TMWrGkTrYdQZvASHRjfN- HWbpKjxG29DAbva)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_midsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_midsp\_1 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k15\_midsp\_1 : \iota \Rightarrow \iota$  be given. Let  $k10\_midsp\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $g2\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v8\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k14\_midsp\_1 : \iota \Rightarrow \iota$  be given. Let  $k12\_midsp\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $u2\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 \\ & X1 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X0) X0)))) \wedge (m1\_subset\_1 X2 X0)) \Rightarrow (\forall X3. \\ & \forall X4. \forall X5. (g2\_algstr\_0 X0 X1 X2 = g2\_algstr\_0 X3 X4 X5) \Rightarrow \\ & ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_midsp\_1 X0) \wedge (l1\_midsp\_1 X0))) \Rightarrow ((\neg v2\_struct\_0 (k15\_midsp\_1 X0)) \wedge (v8\_algstr\_0 (k15\_midsp\_1 X0))) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_midsp\_1 X0) \wedge (l1\_midsp\_1 X0))) \Rightarrow (l2\_algstr\_0 (k15\_midsp\_1 X0)) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_midsp\_1 X0) \wedge (l1\_midsp\_1 X0))) \Rightarrow (m1\_subset\_1 (k14\_midsp\_1 X0) (k10\_midsp\_1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_midsp\_1 X0) \wedge (l1\_midsp\_1 \\ X0))) \Rightarrow ((v1\_funct\_1 (k12\_midsp\_1 X0)) \wedge ((v1\_funct\_2 (k12\_midsp\_1 \\ X0) (k2\_zfmisc\_1 (k10\_midsp\_1 X0) (k10\_midsp\_1 X0)) (k10\_midsp\_1 \\ X0)) \wedge (m1\_subset\_1 (k12\_midsp\_1 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ (k2\_zfmisc\_1 (k10\_midsp\_1 X0) (k10\_midsp\_1 X0)) (k10\_midsp\_1 \\ X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_midsp\_1 X0) \wedge (l1\_midsp\_1 \\ X0))) \Rightarrow (k15\_midsp\_1 X0 = g2\_algstr\_0 (k10\_midsp\_1 X0) (k12\_midsp\_1 \\ X0) (k14\_midsp\_1 X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l2\_algstr\_0 X0) \Rightarrow ((v8\_algstr\_0 X0) \Rightarrow (X0 = g2\_algstr\_0 \\ (u1\_struct\_0 X0) (u1\_algstr\_0 X0) (u2\_struct\_0 X0))) \end{aligned} \quad (7)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_midsp\_1 X0) \wedge (l1\_midsp\_1 \\ X0))) \Rightarrow (u1\_struct\_0 (k15\_midsp\_1 X0) = k10\_midsp\_1 X0) \end{aligned}$$