

t35\_midsp\_1

(TMWxSnt7uMUipxYqLF2Hq8zKLuqtwFFtoR8)

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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_midsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_midsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_midsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_midsp\_1 X0) \wedge (l1\_midsp\_1 \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_midsp\_1 X2 X0) \Rightarrow (\exists X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \wedge \\ & (X2 = k5\_midsp\_1 X0 (k1\_domain\_1 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X0) X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_midsp\_1 X0) \wedge (l1\_midsp\_1 \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k8\_midsp\_1 X0 X1 X2 = k5\_midsp\_1 \\ & X0 (k1\_domain\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0) X1 X2)))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_midsp\_1 X0) \wedge (l1\_midsp\_1 \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_midsp\_1 X2 X0) \Rightarrow (\exists X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \wedge \\ & (X2 = k8\_midsp\_1 X0 X1 X3)))) \end{aligned}$$