

t10\_midsp\_3  
(TMKXJz4Q3f8gZbjv376ywSv1efwnCEdjVpx)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_midsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_midsp\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $m1\_midsp\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_midsp\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_numbers) \Rightarrow ((m1\_midsp\_3 X0 X1) \Leftrightarrow (X0 \in k2\_finseq\_1 (k2\_nat\_1 \\ & X1 np\_1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_numbers) \Rightarrow (\forall X2.((\neg v2\_struct\_0 X2) \wedge ((v2\_midsp\_1 \\ & X2) \wedge (l1\_midsp\_3 X2 (k2\_nat\_1 X1 np\_2)))) \Rightarrow (\forall X3.(m1\_subset\_1 \\ & X3 (u1\_struct\_0 X2)) \Rightarrow (\forall X4.(m2\_finseq\_2 X4 (u1\_struct\_0 \\ & X2) (k4\_finseq\_2 (k2\_nat\_1 X1 np\_1) (u1\_struct\_0 X2))) \Rightarrow ((X0 \in \\ & k2\_finseq\_1 (k2\_nat\_1 X1 np\_1)) \Rightarrow ((k1\_funct\_1 (k1\_midsp\_3 (u1\_struct\_0 \\ & X2) (k2\_nat\_1 X1 np\_1) X4 X0 X3) X0 = X3) \wedge (\forall X5.(m1\_subset\_1 \\ & X5 k5\_numbers) \Rightarrow ((X5 \in k7\_subset\_1 k5\_numbers (k4\_finseq\_1 X4) \\ & (k1\_tarski X0)) \Rightarrow (k1\_funct\_1 (k1\_midsp\_3 (u1\_struct\_0 X2) (k2\_nat\_1 \\ & X1 np\_1) X4 X0 X3) X5 = k1\_funct\_1 X4 X5)))))))))) \end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_numbers) \Rightarrow (\forall X2.((\neg v2\_struct\_0 X2) \wedge (v2\_midsp\_1 \\ & X2) \wedge (l1\_midsp\_3 X2 (k2\_nat\_1 X0 np\_2)))) \Rightarrow (\forall X3.(m1\_subset\_1 \\ & X3 (u1\_struct\_0 X2)) \Rightarrow (\forall X4.(m2\_finseq\_2 X4 (u1\_struct\_0 \\ & X2) (k4\_finseq\_2 (k2\_nat\_1 X0 np\_1) (u1\_struct\_0 X2))) \Rightarrow (\forall X5. \\ & (m1\_midsp\_3 X5 X0) \Rightarrow ((X5 = X1) \Rightarrow (k1\_funct\_1 (k1\_midsp\_3 (u1\_struct\_0 \\ & X2) (k2\_nat\_1 X0 np\_1) X4 X1 X3) X5 = X3)))))) \end{aligned}$$