t16_midsp_3 (TMGhJXEspEtd-HHUsPm1kGKwVEXTk8RdgsRN)

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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 $v4\_midsp\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_midsp\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_midsp\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k8\_midsp\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_midsp\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_midsp\_1\ X1) \wedge (l1\_midsp\_3\ X1\ (k2\_nat\_1\ X0\ np\_\_2)))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X1)) \Rightarrow (\forall X3.(m2\_finseq\_2\ X3\ (u1\_struct\_0\ X1)\ (k4\_finseq\_2\ (k2\_nat\_1\ X0\ np\_\_1)\ (u1\_struct\_0\ X1))) \Rightarrow (\forall X4.((v4\_midsp\_2\ X4\ X1) \wedge (l1\_midsp\_2\ X4\ X1)) \Rightarrow (\forall X5.(m2\_finseq\_2\ X5\ (u1\_struct\_0\ (u1\_midsp\_2\ X1\ X4))\ (k4\_finseq\_2\ (k2\_nat\_1\ X0\ np\_\_1)\ (u1\_struct\_0\ (u1\_midsp\_2\ X1\ X4)))) \Rightarrow ((k8\_midsp\_3\ X0\ X1\ X4\ X2\ X3 = X5) \Leftrightarrow (k7\_midsp\_3\ X0\ X1\ X4\ X2\ X5 = X3)))))))) \tag{1}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1) \wedge (m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2\ X1\ X0) \Rightarrow (\forall X2.(m2\_finseq\_2\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(v7\_ordinal1\ X1))\Rightarrow(k2\_nat\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(v7\_ordinal1\ (k2\_xcmplx\_0\ X0\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_midsp\_1\ X1)\wedge(l1\_midsp\_3\ X1\ (k2\_nat\_1\ X0\ np\_\_2))))\wedge(((v4\_midsp\_2\ X2\ X1)\wedge(l1\_midsp\_2\ X2\ X1))\wedge((m1\_subset\_1\ X3\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X4\ (k4\_finseq\_2\ (k2\_nat\_1\ X0\ np\_\_1)\ (u1\_struct\_0\ (u1\_midsp\_2\ X1\ X2))))))))\Rightarrow(m2\_finseq\_2\ (k7\_midsp\_3\ X0\ X1\ X2\ X3\ X4)\ (u1\_struct\_0\ X1)\ (k4\_finseq\_2\ (k2\_nat\_1\ X0\ np\_\_1)\ (u1\_struct\_0\ X1))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(v7\_ordinal1\ X0)\Rightarrow(m1\_finseq\_2\ (k4\_finseq\_2\ X0\ X1)\ X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(v7\_ordinal1\ X1))\Rightarrow(k2\_nat\_1\ X0\ X1 = k2\_nat\_1\ X1\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{10}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_midsp\_1\ X1)\wedge(l1\_midsp\_3\ X1\ (k2\_nat\_1\ X0\ np\_\_2))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X1))\Rightarrow(\forall X3.((v4\_midsp\_2\ X3\ X1)\wedge(l1\_midsp\_2\ X3\ X1))\Rightarrow(\forall X4.(m2\_finseq\_2\ X4\ (u1\_struct\_0\ (u1\_midsp\_2\ X1\ X3))\ (k4\_finseq\_2\ (k2\_nat\_1\ X0\ np\_\_1)\ (u1\_struct\_0\ (u1\_midsp\_2\ X1\ X3))))\Rightarrow(k8\_midsp\_3\ X0\ X1\ X3\ X2\ (k7\_midsp\_3\ X0\ X1\ X3\ X2\ X4) = X4)))))$$