t16_waybel_9 (TMVZDPbHcd-HGbhP2Foy7D3A8GUGgEM3o5G8)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v7\_waybel\_0 : \iota \Rightarrow o$ be given. Let $l1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_waybel\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_orders\_2 : \iota \Rightarrow \iota$ be given. Let $k1\_toler\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1\_xboole\_0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((X0 \in X1) \Rightarrow (k1\_funct\_1\ (k5\_relat\_1\ X2\ X1)\ X0 = k1\_funct\_1\ X2\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0) \wedge (((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ X1) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \wedge (m1\_subset\_1\ X3\ X0))) \Rightarrow (k3\_funct\_2\ X0\ X1\ X2\ X3 = k1\_funct\_1\ X2\ X3) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow(k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v7\_waybel\_0\ X1)\wedge(l1\_waybel\_0\ X1\ X0)))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X1))))\Rightarrow((\neg v2\_struct\_0\ (k4\_waybel\_9\ X0\ X1\ X2))\wedge(v6\_waybel\_0\ (k4\_waybel\_9\ X0\ X1\ X2)\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_struct\_0\ X0)\wedge(l1\_waybel\_0\ X1\ X0))\Rightarrow((v1\_funct\_1\ (u1\_waybel\_0\ X0\ X1))\wedge((v1\_funct\_2\ (u1\_waybel\_0\ X0\ X1)\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ (u1\_waybel\_0\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))))))) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow(\forall X1.(l1\_waybel\_0\ X1\ X0)\Rightarrow(l1\_orders\_2\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\wedge(((\neg v2\_struct\_0\ X1)\wedge(l1\_waybel\_0\ X1\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X1))))\Rightarrow((v6\_waybel\_0\ (k4\_waybel\_9\ X0\ X1\ X2)\ X0)\wedge(l1\_waybel\_0\ (k4\_waybel\_9\ X0\ X1\ X2)\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l1\_waybel\_0\ X1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X1))\Rightarrow(k2\_waybel\_0\ X0\ X1\ X2 = k3\_funct\_2\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)\ (u1\_waybel\_0\ X0\ X1)\ X2))) \tag{12}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l1\_waybel\_0\ X1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X1))\Rightarrow(\forall X3.((v6\_waybel\_0\ X3\ X0)\wedge(l1\_waybel\_0\ X3\ X0))\Rightarrow((X3 = k4\_waybel\_9\ X0\ X1\ X2)\Leftrightarrow((\forall X4.(X4 \in u1\_struct\_0\ X3)\Leftrightarrow(\exists X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X1))\wedge((X5 = X4)\wedge(r1\_orders\_2\ X1\ X2\ X5))))\wedge((r2\_relset\_1\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X3)\ (u1\_orders\_2\ X3)\ (k1\_toler\_1\ (u1\_orders\_2\ X1)\ (u1\_struct\_0\ X3)))\wedge(u1\_waybel\_0\ X0\ X3 = k2\_partfun1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)\ (u1\_waybel\_0\ X0\ X1)\ (u1\_struct\_0\ X3)))))))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{14}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v7\_waybel\_0\ X1)\wedge(l1\_waybel\_0\ X1\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X1))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X1))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ (k4\_waybel\_9\ X0\ X1\ X2)))\Rightarrow((X3 = X4)\Rightarrow(k2\_waybel\_0\ X0\ X1\ X3 = k2\_waybel\_0\ X0\ (k4\_waybel\_9\ X0\ X1\ X2)\ X4))))))$$