t14_waybel_5 (TMJQ3ZBZMULLcqHSLkoimvvynWLKy1wTXTF)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_waybel\_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_yellow\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_waybel\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_waybel\_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_yellow\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funcop\_1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1) \wedge (l1\_orders\_2\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_funcop\_1\ X2))) \Rightarrow ((\neg (X0 \in k2\_relset\_1\ (u1\_struct\_0\ X1)\ (k4\_waybel\_5\ X1\ X2)) \wedge (\forall X3.\neg (X3 \in k9\_xtuple\_0\ X2) \wedge (X0 = k4\_yellow\_2\ X1\ (k1\_funct\_1\ X2\ X3)))) \wedge (((\exists X3.(X3 \in k9\_xtuple\_0\ X2) \wedge (X0 = k4\_yellow\_2\ X1\ (k1\_funct\_1\ X2\ X3))) \Rightarrow (X0 \in k2\_relset\_1\ (u1\_struct\_0\ X1)\ (k4\_waybel\_5\ X1\ X2))) \wedge ((\neg (X0 \in k2\_relset\_1\ (u1\_struct\_0\ X1)\ (k5\_waybel\_5\ X1\ X2)) \wedge (\forall X3.\neg (X3 \in k9\_xtuple\_0\ X2) \wedge (X0 = k5\_yellow\_2\ X1\ (k1\_funct\_1\ X2\ X3)))) \wedge (((\exists X3.(X3 \in k9\_xtuple\_0\ X2) \wedge (X0 = k5\_yellow\_2\ X1\ (k1\_funct\_1\ X2\ X3))) \Rightarrow (X0 \in k2\_relset\_1\ (u1\_struct\_0\ X1)\ (k5\_waybel\_5\ X1\ X2))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k7\_funcop\_1\ X0\ X1 = k2\_funcop\_1\ X0\ X1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge((v1\_funct\_1\ X2)\wedge(v1\_partfun1\ X2\ X0))))\wedge((m2\_pboole\ X3\ X0\ X2\ (k7\_funcop\_1\ X0\ X1))\wedge(m1\_subset\_1\ X4\ X0)))))\Rightarrow(k1\_waybel\_5\ X0\ X1\ X2\ X3\ X4 = k1\_funct\_1\ X3\ X4) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ (k2\_funcop\_1\ X0\ X1))\wedge((v4\_relat\_1\ (k2\_funcop\_1\ X0\ X1)\ X0)\wedge((v1\_funct\_1\ (k2\_funcop\_1\ X0\ X1))\wedge(v1\_partfun1\ (k2\_funcop\_1\ X0\ X1)\ X0))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ (k2\_funcop\_1\ X0\ X1))\wedge(v1\_funct\_1\ (k2\_funcop\_1\ X0\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.v4\_relat\_1\ (k2\_funcop\_1\ X0\ X1)\ X0 \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge(v1\_partfun1\ X1\ X0))))\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge((v1\_funct\_1\ X2)\wedge(v1\_partfun1\ X2\ X0)))))\Rightarrow(\forall X3.(m2\_pboole\ X3\ X0\ X1\ X2)\Rightarrow((v1\_relat\_1\ X3)\wedge((v4\_relat\_1\ X3\ X0)\wedge((v1\_funct\_1\ X3)\wedge(v1\_partfun1\ X3\ X0))))) \tag{11}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(\\ m1\_subset\_1\ (k1\_relset\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(\\ (v1\_partfun1\ X1\ X0)\Leftrightarrow(k1\_relset\_1\ X0\ X1 = X0)) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge(v1\_partfun1\ X1\ X0))))\wedge((v1\_relat\_1\\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge((v1\_funct\_1\ X2)\wedge(v1\_partfun1\ X2\ X0)))))\Rightarrow\\ (\forall X3.(m2\_pboole\ X3\ X0\ X1\ X2)\Rightarrow(v1\_funcop\_1\ X3)) \tag{15}$$

Theorem 1

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l1\_orders\_2\ X1))\Rightarrow\\ (\forall X2.(\neg v1\_xboole\_0\ X2)\Rightarrow(\forall X3.((v1\_relat\_1\ X3)\wedge\\ ((v4\_relat\_1\ X3\ X2)\wedge((v1\_funct\_1\ X3)\wedge(v1\_partfun1\ X3\ X2))))\Rightarrow\\ (\forall X4.(m2\_pboole\ X4\ X2\ X3\ (k7\_funcop\_1\ X2\ (u1\_struct\_0\ X1)))\Rightarrow\\ ((\neg(X0\in k2\_relset\_1\ (u1\_struct\_0\ X1)\ (k4\_waybel\_5\ X1\ X4))\wedge(\forall X5.\\ (m1\_subset\_1\ X5\ X2)\Rightarrow(X0\neq k4\_yellow\_2\ X1\ (k1\_waybel\_5\ X2\ (u1\_struct\_0\\ X1)\ X3\ X4\ X5))))\wedge(((\exists X5.(m1\_subset\_1\ X5\ X2)\wedge(X0 = k4\_yellow\_2\\ X1\ (k1\_waybel\_5\ X2\ (u1\_struct\_0\ X1)\ X3\ X4\ X5)))\Rightarrow(X0\in k2\_relset\_1\\ (u1\_struct\_0\ X1)\ (k4\_waybel\_5\ X1\ X4)))\wedge((\neg(X0\in k2\_relset\_1\ (u1\_struct\_0\\ X1)\ (k5\_waybel\_5\ X1\ X4))\wedge(\forall X5.(m1\_subset\_1\ X5\ X2)\Rightarrow(X0\neq\\ k5\_yellow\_2\ X1\ (k1\_waybel\_5\ X2\ (u1\_struct\_0\ X1)\ X3\ X4\ X5))))\wedge((\\ \exists X5.(m1\_subset\_1\ X5\ X2)\wedge(X0 = k5\_yellow\_2\ X1\ (k1\_waybel\_5\\ X2\ (u1\_struct\_0\ X1)\ X3\ X4\ X5)))\Rightarrow(X0\in k2\_relset\_1\ (u1\_struct\_0\ X1)\\ (k5\_waybel\_5\ X1\ X4)))))))))$$