t21_waybel_2 (TMMB44tfN5vqcDbsfnw1XTyQGNffD4LLhod)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_waybel\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_finsub\_1 : \iota \Rightarrow \iota$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $g1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_waybel\_0 : \iota \Rightarrow o$ be given. Let $l1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_2 : \iota \Rightarrow o$ be given. Let $k1\_yellow\_1 : \iota \Rightarrow \iota$ be given. Let $v4\_relat\_2 : \iota \Rightarrow o$ be given. Let $v8\_relat\_2 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_orders\_2 : \iota \Rightarrow \iota$ be given. Let $u1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((l1\_struct\_0\ X0)\wedge ((m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X1)))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ (u1\_struct\_0\ X0))))))))\Rightarrow(\forall X4.\forall X5.\forall X6.\forall X7.(g1\_waybel\_0\ X0\ X1\ X2\ X3 = g1\_waybel\_0\ X4\ X5\ X6\ X7)\Rightarrow((X0 = X4)\wedge((X1 = X5)\wedge((X2 = X6)\wedge(X3 = X7)))))) \tag{1}$$

Assume the following.

$$\forall X0.\exists X1.m1\_subset\_1\ X1\ X0 \tag{2}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ (u1\_struct\_0\ X0))))))))\Rightarrow((\neg v2\_struct\_0\ (k2\_waybel\_2\ X0\ X1\ X2))\wedge((v7\_waybel\_0\ (k2\_waybel\_2\ X0\ X1\ X2))\wedge(l1\_waybel\_0\ (k2\_waybel\_2\ X0\ X1\ X2)\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_relat\_2\ (k1\_yellow\_1\ X0))\wedge((v4\_relat\_2\ (k1\_yellow\_1\ X0))\wedge((v8\_relat\_2\ (k1\_yellow\_1\ X0))\wedge((v1\_partfun1\ (k1\_yellow\_1\ X0)\ X0)\wedge(m1\_subset\_1\ (k1\_yellow\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((l1\_struct\_0\ X0)\wedge((m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X1)))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ (u1\_struct\_0\ X0))))))))\Rightarrow((v6\_waybel\_0\ (g1\_waybel\_0\ X0\ X1\ X2\ X3)\ X0)\wedge(l1\_waybel\_0\ (g1\_waybel\_0\ X0\ X1\ X2\ X3)\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ (u1\_struct\_0\ X0))))))\Rightarrow(\forall X3.((\neg v2\_struct\_0\ X3)\wedge((v7\_waybel\_0\ X3)\wedge(l1\_waybel\_0\ X3\ X0)))\Rightarrow((X3 = k2\_waybel\_2\ X0\ X1\ X2)\Leftrightarrow(\exists X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (k5\_finsub\_1\ X1)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k5\_finsub\_1\ X1)\ (u1\_struct\_0\ X0))))))\wedge(\forall X5.(m1\_subset\_1\ X5\ (k5\_finsub\_1\ X1))\Rightarrow((k3\_funct\_2\ (k5\_finsub\_1\ X1)\ (u1\_struct\_0\ X0)\ X4\ X5 = k1\_yellow\_0\ X0\ (k7\_relset\_1\ X1\ (u1\_struct\_0\ X0)\ X2\ X5))\wedge(X3 = g1\_waybel\_0\ X0\ (k5\_finsub\_1\ X1)\ (k1\_yellow\_1\ (k5\_finsub\_1\ X1))\ X4))))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_struct\_0\ X0)\wedge(l1\_waybel\_0\ X1\ X0))\Rightarrow((v6\_waybel\_0\ X1\ X0)\Rightarrow(X1 = g1\_waybel\_0\ X0\ (u1\_struct\_0\ X1)\ (u1\_orders\_2\ X1)\ (u1\_waybel\_0\ X0\ X1))) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ (u1\_struct\_0\ X0))))))\Rightarrow((m1\_subset\_1\ X2\ (u1\_struct\_0\ (k2\_waybel\_2\ X0\ X1\ X3)))\Leftrightarrow(m1\_subset\_1\ X2\ (k5\_finsub\_1\ X1))))$$