t27_waybel17 (TMLHRNZZs-bcgW31Gt8s2iuab2AWUtMUpcu6)

October 27, 2020

Let $v2\_pre\_topc : \iota \Rightarrow o$ be given. Let $v3\_orders\_2 : \iota \Rightarrow o$ be given. Let $v4\_orders\_2 : \iota \Rightarrow o$ be given. Let $v5\_orders\_2 : \iota \Rightarrow o$ be given. Let $v1\_lattice3 : \iota \Rightarrow o$ be given. Let $v2\_lattice3 : \iota \Rightarrow o$ be given. Let $v3\_lattice3 : \iota \Rightarrow o$ be given. Let $v4\_waybel11 : \iota \Rightarrow o$ be given. Let $l1\_waybel\_9 : \iota \Rightarrow o$ 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 $v2\_waybel\_8 : \iota \Rightarrow o$ be given. Let $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_waybel\_8 : \iota \Rightarrow \iota$ be given. Let $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v3\_waybel\_3 : \iota \Rightarrow o$ be given. Let $r1\_waybel\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_pre\_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge ((v2\_lattice3\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow ((v2\_waybel\_8\ X0) \Leftrightarrow ((v3\_waybel\_3\ X0) \wedge (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\neg(r1\_waybel\_3\ X0\ X1\ X2) \wedge (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\neg(X3 \in u1\_struct\_0\ (k1\_waybel\_8\ X0)) \wedge ((r3\_orders\_2\ X0\ X1\ X3) \wedge (r3\_orders\_2\ X0\ X3\ X2)))))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v3\_waybel\_3\ X0)\wedge((v4\_waybel11\ X0)\wedge(l1\_waybel\_9\ X0))))))))))\Rightarrow(\forall X1.((v2\_pre\_topc\ X1)\wedge((v3\_orders\_2\ X1)\wedge((v4\_orders\_2\ X1)\wedge((v5\_orders\_2\ X1)\wedge((v1\_lattice3\ X1)\wedge((v2\_lattice3\ X1)\wedge((v3\_lattice3\ X1)\wedge((v3\_waybel\_3\ X1)\wedge((v4\_waybel11\ X1)\wedge(l1\_waybel\_9\ X1))))))))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow((v5\_pre\_topc\ X2\ X0\ X1)\Leftrightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow((r1\_waybel\_3\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X3))\Leftrightarrow(\exists X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\wedge((r1\_waybel\_3\ X0\ X5\ X3)\wedge(r1\_waybel\_3\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X5))))))))))) \tag{2}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v4\_waybel11\ X0)\wedge(l1\_waybel\_9\ X0))))))))\Rightarrow(\forall X1.((v2\_pre\_topc\ X1)\wedge((v3\_orders\_2\ X1)\wedge((v4\_orders\_2\ X1)\wedge((v5\_orders\_2\ X1)\wedge((v1\_lattice3\ X1)\wedge((v2\_lattice3\ X1)\wedge((v3\_lattice3\ X1)\wedge((v4\_waybel11\ X1)\wedge(l1\_waybel\_9\ X1))))))))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(((v2\_waybel\_8\ X1)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow((X4\in u1\_struct\_0\ (k1\_waybel\_8\ X1))\Rightarrow((r3\_orders\_2\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X3))\Leftrightarrow(\exists X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\wedge((X5\in u1\_struct\_0\ (k1\_waybel\_8\ X0))\wedge((r3\_orders\_2\ X0\ X5\ X3)\wedge(r3\_orders\_2\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X5))))))))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow((r1\_waybel\_3\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X3))\Leftrightarrow(\exists X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\wedge((r1\_waybel\_3\ X0\ X5\ X3)\wedge(r1\_waybel\_3\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X5))))))))))) \tag{3}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v4\_waybel11\ X0)\wedge(l1\_waybel\_9\ X0))))))))\Rightarrow(\forall X1.((v2\_pre\_topc\ X1)\wedge((v3\_orders\_2\ X1)\wedge((v4\_orders\_2\ X1)\wedge((v5\_orders\_2\ X1)\wedge((v1\_lattice3\ X1)\wedge((v2\_lattice3\ X1)\wedge((v3\_lattice3\ X1)\wedge((v4\_waybel11\ X1)\wedge(l1\_waybel\_9\ X1))))))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(((v2\_waybel\_8\ X0)\wedge((v2\_waybel\_8\ X1)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow((r1\_waybel\_3\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X3))\Leftrightarrow(\exists X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\wedge((r1\_waybel\_3\ X0\ X5\ X3)\wedge(r1\_waybel\_3\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X5))))))))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow((X4\in u1\_struct\_0\ (k1\_waybel\_8\ X1))\Rightarrow((r3\_orders\_2\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X3))\Leftrightarrow(\exists X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\wedge((X5\in u1\_struct\_0\ (k1\_waybel\_8\ X0))\wedge((r3\_orders\_2\ X0\ X5\ X3)\wedge(r3\_orders\_2\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X5))))))))))))) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_waybel\_9\ X0)\Rightarrow((l1\_pre\_topc\ X0)\wedge(l1\_orders\_2\ X0)) \tag{5}$$

Theorem 1

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v4\_waybel11\ X0)\wedge(l1\_waybel\_9\ X0))))))))\Rightarrow(\forall X1.((v2\_pre\_topc\ X1)\wedge((v3\_orders\_2\ X1)\wedge((v4\_orders\_2\ X1)\wedge((v5\_orders\_2\ X1)\wedge((v1\_lattice3\ X1)\wedge((v2\_lattice3\ X1)\wedge((v3\_lattice3\ X1)\wedge((v4\_waybel11\ X1)\wedge(l1\_waybel\_9\ X1))))))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(((v2\_waybel\_8\ X0)\wedge((v2\_waybel\_8\ X1))\Rightarrow((v5\_pre\_topc\ X2\ X0\ X1)\Leftrightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow((X4\in u1\_struct\_0\ (k1\_waybel\_8\ X1))\Rightarrow((r3\_orders\_2\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X3))\Leftrightarrow(\exists X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\wedge((X5\in u1\_struct\_0\ (k1\_waybel\_8\ X0))\wedge((r3\_orders\_2\ X0\ X5\ X3)\wedge(r3\_orders\_2\ X1\ X4\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X5)))))))))))))$$