t18_pcs_0 (TMFn6ZDg3thaGfPfMpLKK4Q7pE6cuBNZSA2)

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Let $v14\_pcs\_0 : \iota \Rightarrow o$ be given. Let $l2\_pcs\_0 : \iota \Rightarrow o$ be given. Let $r1\_tsep\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8\_relat\_2 : \iota \Rightarrow o$ be given. Let $u1\_orders\_2 : \iota \Rightarrow \iota$ be given. Let $k18\_pcs\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_pcs\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g2\_pcs\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_pcs\_0 : \iota \Rightarrow \iota$ be given. Let $v2\_orders\_2 : \iota \Rightarrow o$ be given. Let $v4\_orders\_2 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $l1\_pcs\_0 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v12\_pcs\_0 : \iota \Rightarrow o$ be given. Let $v3\_orders\_2 : \iota \Rightarrow o$ be given. Let $v4\_pcs\_0 : \iota \Rightarrow o$ be given. Let $v6\_pcs\_0 : \iota \Rightarrow o$ be given. Let $v13\_pcs\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((v8\_relat\_2\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))) \Rightarrow (\forall X3.((v8\_relat\_2\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X1)))) \Rightarrow ((r1\_xboole\_0\ X0\ X1) \Rightarrow (v8\_relat\_2\ (k2\_pcs\_0\ X0\ X0\ X1\ X1\ X2\ X3)))) \tag{1}$$

Assume the following.

$$\forall X0.(l2\_pcs\_0\ X0) \Rightarrow (\forall X1.(l2\_pcs\_0\ X1) \Rightarrow (k18\_pcs\_0\ X0\ X1 = g2\_pcs\_0\ (k2\_xboole\_0\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\ (k2\_pcs\_0\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X1)\ (u1\_orders\_2\ X0)\ (u1\_orders\_2\ X1))\ (k2\_pcs\_0\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X1)\ (u1\_pcs\_0\ X0)\ (u1\_pcs\_0\ X1)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.((m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))) \wedge (m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X3)))) \Rightarrow (k2\_pcs\_0\ X0\ X1\ X2\ X3\ X4\ X5 = k2\_xboole\_0\ X4\ X5) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))\Rightarrow(\forall X3.\forall X4.\forall X5.(g2\_pcs\_0\ X0\ X1\ X2 = g2\_pcs\_0\ X3\ X4\ X5)\Rightarrow((X0 = X3)\wedge((X1 = X4)\wedge(X2 = X5)))) \tag{4}$$

Assume the following.

$$\forall X0.((v2\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0)))\Rightarrow(v8\_relat\_2\ (u1\_orders\_2\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.(l1\_pcs\_0\ X0)\Rightarrow(m1\_subset\_1\ (u1\_pcs\_0\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)))) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(m1\_subset\_1\ (u1\_orders\_2\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)))) \tag{7}$$

Assume the following.

$$\forall X0.(l2\_pcs\_0\ X0)\Rightarrow((l1\_orders\_2\ X0)\wedge(l1\_pcs\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_pcs\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.((m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X3))))\Rightarrow(m1\_subset\_1\ (k2\_pcs\_0\ X0\ X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_xboole\_0\ X0\ X2)\ (k2\_xboole\_0\ X1\ X3)))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))\Rightarrow((v12\_pcs\_0\ (g2\_pcs\_0\ X0\ X1\ X2))\wedge(l2\_pcs\_0\ (g2\_pcs\_0\ X0\ X1\ X2))) \tag{11}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow(\forall X1.(l1\_struct\_0\ X1)\Rightarrow((r1\_tsep\_1\ X0\ X1)\Leftrightarrow(r1\_xboole\_0\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0\ X0\ X1 = k2\_xboole\_0\ X1\ X0 \tag{13}$$

Assume the following.

$$\forall X0.(l2\_pcs\_0\ X0)\Rightarrow((v14\_pcs\_0\ X0)\Rightarrow((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v4\_pcs\_0\ X0)\wedge((v6\_pcs\_0\ X0)\wedge(v13\_pcs\_0\ X0)))))) \tag{14}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v3\_orders\_2\ X0)\Rightarrow(v2\_orders\_2\ X0)) \tag{15}$$

Assume the following.

$$\forall X0.(l2\_pcs\_0\ X0)\Rightarrow((v12\_pcs\_0\ X0)\Rightarrow(X0 = g2\_pcs\_0\ (u1\_struct\_0\ X0)\ (u1\_orders\_2\ X0)\ (u1\_pcs\_0\ X0))) \tag{16}$$

Theorem 1

$$\forall X0.((v14\_pcs\_0\ X0)\wedge(l2\_pcs\_0\ X0))\Rightarrow(\forall X1.((v14\_pcs\_0\ X1)\wedge(l2\_pcs\_0\ X1))\Rightarrow((r1\_tsep\_1\ X0\ X1)\Rightarrow(v8\_relat\_2\ (u1\_orders\_2\ (k18\_pcs\_0\ X0\ X1)))))$$