t18_abcmiz_0 (TMQv5Ne7r38baoRRM87Z4RoogjBF5gxM4Ee)

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Let $v8\_abcmiz\_0 : \iota \Rightarrow o$ be given. Let $l2\_abcmiz\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_abcmiz\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_abcmiz\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_abcmiz\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $l1\_abcmiz\_0 : \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_abcmiz\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(\neg(\neg r1\_xboole\_0\ X0\ X1) \wedge (\forall X2.\neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2.(X2 \in X0) \wedge (X2 \in X1)) \wedge (r1\_xboole\_0\ X0\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.(l2\_abcmiz\_0\ X0) \Rightarrow ((l1\_orders\_2\ X0) \wedge (l1\_abcmiz\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((l2\_abcmiz\_0\ X0) \wedge (m1\_subset\_1\ X1\ (u1\_abcmiz\_0\ X0))) \Rightarrow (m1\_subset\_1\ (k3\_abcmiz\_0\ X0\ X1)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_abcmiz\_0\ X0) \wedge (m1\_subset\_1\ X1\ (u1\_abcmiz\_0\ X0))) \Rightarrow (m1\_subset\_1\ (k1\_abcmiz\_0\ X0\ X1)\ (u1\_abcmiz\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.(l2\_abcmiz\_0\ X0) \Rightarrow ((v8\_abcmiz\_0\ X0) \Leftrightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_abcmiz\_0\ X0)) \Rightarrow (\neg(X2 \in k2\_abcmiz\_0\ X0\ X1) \wedge (k1\_abcmiz\_0\ X0\ X2 \in k2\_abcmiz\_0\ X0\ X1))))) \tag{5}$$

Assume the following.

$$\forall X0.(l2\_abcmiz\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_abcmiz\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((X2 = k3\_abcmiz\_0\ X0\ X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow(\exists X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\wedge((X3 = X4)\wedge(X1 \in k2\_abcmiz\_0\ X0\ X4))))))) \tag{6}$$

Theorem 1

$$\forall X0.((v8\_abcmiz\_0\ X0)\wedge(l2\_abcmiz\_0\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_abcmiz\_0\ X0))\Rightarrow(r1\_xboole\_0\ (k3\_abcmiz\_0\ X0\ X1)\ (k3\_abcmiz\_0\ X0\ (k1\_abcmiz\_0\ X0\ X1))))$$