t23_subset_1 (TMNTzcj-tur3W1M1DbfpqFkDPdz2mnasMNRu)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \Rightarrow (\forall X2.(X2 \in X1) \Rightarrow (X2 \in X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k4\_xboole\_0\ X0\ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (\neg X3 \in X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \Rightarrow (k3\_subset\_1\ X0\ X1 = k4\_xboole\_0\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)) \Rightarrow ((r1\_xboole\_0\ X1\ X2) \Leftrightarrow (r1\_tarski\ X1\ (k3\_subset\_1\ X0\ X2))))$$