t24_eqrel_1 (TMZtSmR-rGcuv9ge9NaumBHQXZgL6oQRcqk9)

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Let $v3\_relat\_2 : \iota \Rightarrow o$ be given. Let $v8\_relat\_2 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0.\forall X1.\forall X2.((v3\_relat\_2\ X2) \wedge ((v8\_relat\_2\ X2) \wedge ((v1\_partfun1\ X2\ X0) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))) \Rightarrow (\forall X3.(X3 \in X0) \Rightarrow ((X1 \in k6\_eqrel\_1\ X0\ X0\ X2\ X3) \Leftrightarrow (k6\_eqrel\_1\ X0\ X0\ X2\ X3 = k6\_eqrel\_1\ X0\ X0\ X2\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v3\_relat\_2\ X3) \wedge ((v1\_partfun1\ X3\ X0) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))) \Rightarrow ((X1 \in k6\_eqrel\_1\ X0\ X0\ X3\ X2) \Leftrightarrow (k4\_tarski\ X1\ X2 \in X3)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X2))) \Rightarrow ((k4\_tarski\ X0\ X1 \in X3) \Rightarrow ((X0 \in X2) \wedge (X1 \in X2))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3\_relat\_2\ X2) \wedge ((v8\_relat\_2\ X2) \wedge ((v1\_partfun1\ X2\ X0) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))) \Rightarrow (\forall X3.(X3 \in X0) \Rightarrow ((k4\_tarski\ X3\ X1 \in X2) \Leftrightarrow (k6\_eqrel\_1\ X0\ X0\ X2\ X3 = k6\_eqrel\_1\ X0\ X0\ X2\ X1))) \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.((v3\_relat\_2\ X1)\wedge((v8\_relat\_2\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))\Rightarrow(\forall X2.\forall X3.\neg(X3\in X0)\wedge((k6\_eqrel\_1\ X0\ X0\ X1\ X2\neq k6\_eqrel\_1\ X0\ X0\ X1\ X3)\wedge(\neg r1\_xboole\_0\ (k6\_eqrel\_1\ X0\ X0\ X1\ X2)\ (k6\_eqrel\_1\ X0\ X0\ X1\ X3))))$$