t5_tmap_1 (TMYmSHKdAkvxWkmq-MaME2vVx3V9HBtxNbNH)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_partfun1 : \iota \Rightarrow \iota$ be given. Let $k4\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ (k2\_xboole\_0\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Rightarrow (k2\_xboole\_0\ X0\ X1 = X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. ((\neg v1\_xboole\_0\ X1) \wedge ((\neg v1\_xboole\_0\ X3) \wedge (((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2\ X4\ X0\ X1) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \wedge ((v1\_funct\_1\ X5) \wedge ((v1\_funct\_2\ X5\ X2\ X3) \wedge (m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X3)))))))) \Rightarrow ((r1\_funct\_2\ X0\ X1\ X2\ X3\ X4\ X5) \Leftrightarrow (X4 = X5)) \tag{4}$$

Assume the following.

$$\forall X0.k6\_partfun1\ X0 = k4\_relat\_1\ X0 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(k4\_subset\_1\ X0\ X1\ X2 = k2\_xboole\_0\ X1\ X2) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow(k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(k5\_relat\_1\ X1\ X0 = X1) \tag{9}$$

Assume the following.

$$v1\_xboole\_0\ k1\_xboole\_0 \tag{10}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k4\_relat\_1\ X0))\wedge((v4\_relat\_1\ (k4\_relat\_1\ X0)\ X0)\wedge((v1\_funct\_1\ (k4\_relat\_1\ X0))\wedge(v1\_partfun1\ (k4\_relat\_1\ X0)\ X0))) \tag{11}$$

Assume the following.

$$\forall X0.(v1\_partfun1\ (k6\_partfun1\ X0)\ X0)\wedge(m1\_subset\_1\ (k6\_partfun1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(((\neg v1\_xboole\_0\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\wedge(((\neg v1\_xboole\_0\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X0)))\wedge(((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X2\ X1)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X1)))))\wedge((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ X3\ X1)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X3\ X1))))))))))\Rightarrow((v1\_funct\_1\ (k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5))\wedge((v1\_funct\_2\ (k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)\wedge(m1\_subset\_1\ (k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1))))) \tag{13}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X2\ X1)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X1)))))\Rightarrow(\forall X5.((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ X3\ X1)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X3\ X1)))))\Rightarrow((k2\_partfun1\ X2\ X1\ X4\ (k9\_subset\_1\ X0\ X2\ X3) = k2\_partfun1\ X3\ X1\ X5\ (k9\_subset\_1\ X0\ X2\ X3))\Rightarrow(\forall X6.((v1\_funct\_1\ X6)\wedge((v1\_funct\_2\ X6\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)\wedge(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)))))\Rightarrow((X6 = k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\Leftrightarrow((k2\_partfun1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X6\ X2 = X4)\wedge(k2\_partfun1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X6\ X3 = X5)))))))))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(((X1\neq k1\_xboole\_0)\Rightarrow((v1\_funct\_2\ X2\ X0\ X1)\Leftrightarrow(X0 = k1\_relset\_1\ X0\ X2)))\wedge((X1 = k1\_xboole\_0)\Rightarrow((v1\_funct\_2\ X2\ X0\ X1)\Leftrightarrow(X2 = k1\_xboole\_0)))) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(k4\_subset\_1\ X0\ X1\ X2 = k4\_subset\_1\ X0\ X2\ X1) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v1\_partfun1\ X2\ X0)\Rightarrow(v1\_funct\_2\ X2\ X0\ X1)) \tag{19}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X2\ X1)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X1)))))\Rightarrow(\forall X5.((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ X3\ X1)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X3\ X1)))))\Rightarrow((k2\_partfun1\ X2\ X1\ X4\ (k9\_subset\_1\ X0\ X2\ X3) = k2\_partfun1\ X3\ X1\ X5\ (k9\_subset\_1\ X0\ X2\ X3))\Rightarrow(((m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X3))\Rightarrow(r1\_funct\_2\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X3\ X1\ (k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ X5))\wedge(((r1\_funct\_2\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X3\ X1\ (k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ X5)\Rightarrow(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X3)))\wedge(((m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X2))\Rightarrow(r1\_funct\_2\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X2\ X1\ (k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ X4))\wedge((r1\_funct\_2\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X2\ X1\ (k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ X4)\Rightarrow(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X2)))))))))))$$