t1_tmap_1 (TMcjTJYMTgPMEN-vWeTPTN5feApAt4i4LqF3)

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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 $r1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (\neg v1\_xboole\_0\ X1)) \Rightarrow ((r1\_subset\_1\ X0\ X1) \Leftrightarrow (r1\_xboole\_0\ X0\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)) \Rightarrow (k9\_subset\_1\ X0\ X1\ X2 = k3\_xboole\_0\ X1\ X2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow (k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{4}$$

Assume the following.

$$v1\_xboole\_0\ k1\_xboole\_0 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0) \wedge (v1\_xboole\_0\ X1)) \Rightarrow ((v1\_xboole\_0\ (k5\_relat\_1\ X0\ X1)) \wedge (v1\_relat\_1\ (k5\_relat\_1\ X0\ X1))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\\((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(((\neg v1\_xboole\_0\ X2)\wedge\\(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\wedge(((\neg v1\_xboole\_0\ X3)\wedge(m1\_subset\_1\\X3\ (k1\_zfmisc\_1\ X0)))\wedge(((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X2\ X1)\wedge\\(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X1)))))\wedge((v1\_funct\_1\\X5)\wedge((v1\_funct\_2\ X5\ X3\ X1)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\\X3\ X1)))))))))\Rightarrow((v1\_funct\_1\ (k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5))\wedge((v1\_funct\_2\\(k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)\wedge(m1\_subset\_1\\(k1\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k4\_subset\_1\\X0\ X2\ X3)\ X1)))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_xboole\_0\ X0\ X1)\Leftrightarrow(k3\_xboole\_0\ X0\ X1 =\\k1\_xboole\_0) \tag{8}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow\\(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\\X0)))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\\X0)))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X2\ X1)\wedge(m1\_subset\_1\\X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X1)))))\Rightarrow(\forall X5.((v1\_funct\_1\\X5)\wedge((v1\_funct\_2\ X5\ X3\ X1)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\\X3\ X1)))))\Rightarrow((k2\_partfun1\ X2\ X1\ X4\ (k9\_subset\_1\ X0\ X2\ X3) = k2\_partfun1\\X3\ X1\ X5\ (k9\_subset\_1\ X0\ X2\ X3))\Rightarrow(\forall X6.((v1\_funct\_1\ X6)\wedge(\\(v1\_funct\_2\ X6\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)\wedge(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\\(k2\_zfmisc\_1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1)))))\Rightarrow((X6 = k1\_tmap\_1\ X0\\X1\ X2\ X3\ X4\ X5)\Leftrightarrow((k2\_partfun1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X6\ X2 = X4)\wedge\\(k2\_partfun1\ (k4\_subset\_1\ X0\ X2\ X3)\ X1\ X6\ X3 = X5)))))))))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\\(k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{10}$$

Theorem 1

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