t54_abcmiz_a (TMU-vbW5M3K7YJUmjFHi2RjaUfSq5burrnGX)

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Let $v1\_instalg1 : \iota \Rightarrow o$ be given. Let $v1\_abcmiz\_1 : \iota \Rightarrow o$ be given. Let $v3\_abcmiz\_1 : \iota \Rightarrow o$ be given. Let $l1\_msualg\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_card\_3 : \iota \Rightarrow \iota$ be given. Let $u3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_msafree3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k28\_abcmiz\_1 : \iota \Rightarrow \iota$ be given. Let $r5\_abcmiz\_a : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r6\_abcmiz\_a : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_abcmiz\_1 : \iota$ be given. Let $k56\_abcmiz\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k54\_abcmiz\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k35\_abcmiz\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $v15\_abcmiz\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k34\_abcmiz\_1 : \iota \Rightarrow \iota$ be given. Let $k45\_abcmiz\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_instalg1\ X0) \wedge ((v1\_abcmiz\_1\ X0) \wedge ((v3\_abcmiz\_1\ X0) \wedge (l1\_msualg\_1\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0))))) \Rightarrow (\forall X2.\ (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ k2\_abcmiz\_1)) \Rightarrow (k56\_abcmiz\_1\ X0\ (k54\_abcmiz\_1\ X0\ X2)\ X1 = X1))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_instalg1\ X0) \wedge ((v1\_abcmiz\_1\ X0) \wedge ((v3\_abcmiz\_1\ X0) \wedge (l1\_msualg\_1\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k2\_abcmiz\_1)) \Rightarrow ((k1\_relset\_1\ k2\_abcmiz\_1\ (k54\_abcmiz\_1\ X0\ X1) = X1) \wedge (\forall X2.(m1\_subset\_1\ X2\ k2\_abcmiz\_1) \Rightarrow ((X2 \in X1) \Rightarrow (k1\_funct\_1\ (k54\_abcmiz\_1\ X0\ X1)\ X2 = k35\_abcmiz\_1\ X2\ X0))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1\ X0)\wedge(l1\_msualg\_1\ X0))))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k2\_abcmiz\_1)))\Rightarrow((v1\_funct\_1\ (k54\_abcmiz\_1\ X0\ X1))\wedge((v2\_funct\_1\ (k54\_abcmiz\_1\ X0\ X1))\wedge(v15\_abcmiz\_1\ (k54\_abcmiz\_1\ X0\ X1)\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1\ X0)\wedge(l1\_msualg\_1\ X0))))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k2\_abcmiz\_1)))\Rightarrow((v1\_funct\_1\ (k54\_abcmiz\_1\ X0\ X1))\wedge(m1\_subset\_1\ (k54\_abcmiz\_1\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k2\_abcmiz\_1\ (k34\_abcmiz\_1\ X0))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1\ X0)\wedge(l1\_msualg\_1\ X0))))\wedge(m1\_subset\_1\ X1\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0))))))\Rightarrow(m1\_subset\_1\ (k45\_abcmiz\_1\ X0\ X1)\ (k1\_zfmisc\_1\ k2\_abcmiz\_1)) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1\ X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0)))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0)))))\Rightarrow((r6\_abcmiz\_a\ X0\ X1\ X2)\Leftrightarrow(\exists X3.((v1\_funct\_1\ X3)\wedge((v2\_funct\_1\ X3)\wedge((v15\_abcmiz\_1\ X3\ X0)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k2\_abcmiz\_1\ (k34\_abcmiz\_1\ X0))))))))\wedge((r1\_tarski\ (k45\_abcmiz\_1\ X0\ X2)\ (k1\_relset\_1\ k2\_abcmiz\_1\ X3))\wedge(r5\_abcmiz\_a\ X0\ X1\ (k56\_abcmiz\_1\ X0\ X3\ X2))))))) \tag{7}$$

Theorem 1

$$\forall X0.((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1\ X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0)))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0)))))\Rightarrow((r5\_abcmiz\_a\ X0\ X1\ X2)\Rightarrow(r6\_abcmiz\_a\ X0\ X1\ X2))))$$