

## t56\_abcmiz\_a

(TMS6wQbM5o5RiN2xJniG5TbCKi4jF7PAJZ1)

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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  $r7\_abcmiz\_a : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_abcmiz\_a : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_abcmiz\_1 : \iota$  be given. Let  $k34\_abcmiz\_1 : \iota \Rightarrow \iota$  be given. Let  $r4\_abcmiz\_a : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k56\_abcmiz\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1\_instalg1 X0) \wedge ((v1\_abcmiz\_1 X0) \wedge ((v3\_abcmiz\_1 \\
 & \quad X0) \wedge (l1\_msualg\_1 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k3\_card\_3 \\
 & \quad (u3\_msualg\_1 X0 (k1\_msafree3 X0 (k28\_abcmiz\_1 X0)))))) \Rightarrow (\forall X2. \\
 & (m1\_subset\_1 X2 (k3\_card\_3 (u3\_msualg\_1 X0 (k1\_msafree3 X0 (k28\_abcmiz\_1 \\
 & \quad X0)))))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k3\_card\_3 (u3\_msualg\_1 \\
 & \quad X0 (k1\_msafree3 X0 (k28\_abcmiz\_1 X0)))))) \Rightarrow ((r7\_abcmiz\_a X0 X1 X2 \\
 & \quad X3) \Leftrightarrow (\exists X4.((v1\_funct\_1 X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 \\
 & \quad (k2\_zfmisc\_1 k2\_abcmiz\_1 (k34\_abcmiz\_1 X0)))))) \wedge ((r4\_abcmiz\_a \\
 & \quad X0 X2 X3 X4) \wedge (X1 = k56\_abcmiz\_1 X0 X4 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((v1\_instalg1 X0) \wedge ((v1\_abcmiz\_1 X0) \wedge ((v3\_abcmiz\_1 \\
 & \quad X0) \wedge (l1\_msualg\_1 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k3\_card\_3 \\
 & \quad (u3\_msualg\_1 X0 (k1\_msafree3 X0 (k28\_abcmiz\_1 X0)))))) \Rightarrow (\forall X2. \\
 & (m1\_subset\_1 X2 (k3\_card\_3 (u3\_msualg\_1 X0 (k1\_msafree3 X0 (k28\_abcmiz\_1 \\
 & \quad X0)))))) \Rightarrow (\forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\
 & \quad (k2\_zfmisc\_1 k2\_abcmiz\_1 (k34\_abcmiz\_1 X0)))))) \Rightarrow ((r4\_abcmiz\_a \\
 & \quad X0 X1 X2 X3) \Leftrightarrow (k56\_abcmiz\_1 X0 X3 X1 = k56\_abcmiz\_1 X0 X3 X2))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1 \\
& \quad X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k3\_card\_3 \\
& \quad (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0))))))\Rightarrow(\forall X2. \\
& (m1\_subset\_1\ X2\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1 \\
& \quad X0))))))\Rightarrow((r1\_abcmiz\_a\ X0\ X1\ X2)\Leftrightarrow(\exists X3.((v1\_funct\_1\ X3)\wedge \\
& (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k2\_abcmiz\_1\ (k34\_abcmiz\_1 \\
& \quad X0))))))\wedge(X1 = k56\_abcmiz\_1\ X0\ X3\ X2))))
\end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1 \\
& \quad X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k3\_card\_3 \\
& \quad (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0))))))\Rightarrow(\forall X2. \\
& (m1\_subset\_1\ X2\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1 \\
& \quad X0))))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k3\_card\_3\ (u3\_msualg\_1 \\
& \quad X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0))))))\Rightarrow((r7\_abcmiz\_a\ X0\ X3\ X1 \\
& \quad X2)\Rightarrow((r1\_abcmiz\_a\ X0\ X3\ X1)\wedge(r1\_abcmiz\_a\ X0\ X3\ X2))))
\end{aligned}$$