

# t20\_abcmiz\_a (TMP- PCwscZjnEQQ5AVhkLYXJYqcZxnwcDuQf)

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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  $v1\_abcmiz\_a : \iota \Rightarrow o$  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  $k1\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k20\_abcmiz\_1 : \iota$  be given. Let  $u4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_abcmiz\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_abcmiz\_1 : \iota$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_abcmiz\_1 : \iota$  be given. Let  $k10\_abcmiz\_1 : \iota$  be given. Let  $k2\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k8\_abcmiz\_1 : \iota$  be given. Let  $k14\_abcmiz\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_xtuple\_0 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $v2\_abcmiz\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$r1\_subset\_1 \ k2\_abcmiz\_1 \ k20\_abcmiz\_1 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (\neg(\neg r1\_xboole\_0 \ X0 \ X1) \wedge (\forall X2. \neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2. (X2 \in X0) \wedge (X2 \in X1))) \wedge (r1\_xboole\_0 \ X0 \ X1) \quad (2)$$

Assume the following.

$$r1\_subset\_1 \ (k2\_tarski \ k9\_abcmiz\_1 \ k10\_abcmiz\_1) \ k20\_abcmiz\_1 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1 \\ & X0)\wedge((v1\_abcmiz\_a\ X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1 \\ & X1\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0))))\Rightarrow \\ & ((\neg k1\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0)\ \in\ k2\_abcmiz\_1)\Leftrightarrow(m1\_subset\_1 \\ & (k1\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0))\ (u4\_struct\_0\ X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1 \\ & X0)\wedge((v1\_abcmiz\_a\ X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1 \\ & X1\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0))))\Rightarrow \\ & (((k1\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0)\ \in\ k2\_abcmiz\_1)\wedge(( \\ & k2\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0)\ =\ k8\_abcmiz\_1)\wedge(m1\_abcmiz\_1 \\ & X1\ X0\ (k14\_abcmiz\_1\ X0))))\vee((k2\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0)\ = \\ & u1\_struct\_0\ X0)\wedge(\neg(\neg(k1\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0)\ \in \\ & k20\_abcmiz\_1)\wedge(k1\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0)\ \in\ u4\_struct\_0 \\ & X0))\wedge((k1\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0)\neq k9\_abcmiz\_1)\wedge \\ & (k1\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0)\neq k10\_abcmiz\_1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_instalg1\ X0)\wedge((v1\_abcmiz\_1\ X0)\wedge((v3\_abcmiz\_1 \\ & X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k3\_card\_3 \\ & (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1\ X0))))\Rightarrow(\forall X2. \\ & (m1\_subset\_1\ X2\ (u4\_struct\_0\ X0))\Rightarrow((k1\_funct\_1\ X1\ k1\_xboole\_0\ = \\ & k4\_tarski\ X2\ (u1\_struct\_0\ X0))\Rightarrow(m1\_abcmiz\_1\ X1\ X0\ (k2\_msualg\_1 \\ & X0\ X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(\neg v1\_xboole\_0\ X1))\Rightarrow \\ & ((r1\_subset\_1\ X0\ X1)\Leftrightarrow(r1\_xboole\_0\ X0\ X1)) \end{aligned} \quad (7)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xtuple\_0\ X0)\Rightarrow(k4\_tarski\ (k1\_xtuple\_0\ X0)\ (k2\_xtuple\_0\ X0) = X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\neg v1\_xboole\_0\ (k2\_tarski\ X0\ X1) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_instalg1\ X0) \wedge ((v1\_abcmiz\_1\ X0) \wedge \\ & ((v3\_abcmiz\_1\ X0) \wedge ((v1\_abcmiz\_a\ X0) \wedge (l1\_msualg\_1\ X0)))))) \wedge ( \\ m1\_subset\_1\ X1\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ (k1\_msafree3\ X0\ (k28\_abcmiz\_1 \\ X0)))))) \Rightarrow (v1\_xtuple\_0\ (k1\_funct\_1\ X1\ k1\_xboole\_0)) \end{aligned} \quad (11)$$

Assume the following.

$$\neg v1\_xboole\_0\ k2\_abcmiz\_1 \quad (12)$$

Assume the following.

$$\neg v1\_xboole\_0\ k20\_abcmiz\_1 \quad (13)$$

Assume the following.

$$k10\_abcmiz\_1 = np\_1 \quad (14)$$

Assume the following.

$$k9\_abcmiz\_1 = k6\_numbers \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. k4\_tarski\ X0\ X1 = k2\_tarski\ (k2\_tarski\ X0\ X1)\ (k1\_tarski\ X0) \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2\_tarski\ X0\ X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_instalg1\ X0) \wedge ((v1\_abcmiz\_1\ X0) \wedge (l1\_msualg\_1 \\ & X0))) \Rightarrow ((v1\_abcmiz\_a\ X0) \Leftrightarrow (\forall X1. (m1\_subset\_1\ X1\ (u4\_struct\_0 \\ & X0)) \Rightarrow ((v2\_abcmiz\_1\ X1\ X0) \Rightarrow ((X1 \in k20\_abcmiz\_1) \wedge ((k1\_xtuple\_0 \\ & X1 = k2\_msualg\_1\ X0\ X1) \wedge (k1\_card\_1\ (k1\_xtuple\_0\ (k2\_xtuple\_0\ X1)) = \\ & k3\_finseq\_1\ (k1\_msualg\_1\ X0\ X1))))))) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_instalg1\ X0) \wedge ((v1\_abcmiz\_1\ X0) \wedge (l1\_msualg\_1 \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1\ X1\ (u4\_struct\_0\ X0)) \Rightarrow ((v2\_abcmiz\_1 \\ & X1\ X0) \Leftrightarrow ((X1 \neq k9\_abcmiz\_1) \wedge (X1 \neq k10\_abcmiz\_1)))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0. \forall X1. k2\_tarski\ X0\ X1 = k2\_tarski\ X1\ X0 \quad (20)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_instal\!g_1 X0) \wedge ((v1\_abcmiz\_1 X0) \wedge ((v3\_abcmiz\_1 \\ & X0) \wedge ((v1\_abcmiz\_a X0) \wedge (l1\_msualg\_1 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 (k3\_card\_3 (u3\_msualg\_1 X0 (k1\_msafree3 X0 (k28\_abcmiz\_1 X0)))))) \Rightarrow \\ & (\neg(k1\_xtuple\_0 (k1\_funct\_1 X1 k1\_xboole\_0) \in k20\_abcmiz\_1) \wedge ( \\ & \forall X2.(m1\_subset\_1 X2 (u4\_struct\_0 X0)) \Rightarrow (\neg(X2 = k1\_xtuple\_0 \\ & (k1\_funct\_1 X1 k1\_xboole\_0)) \wedge ((k2\_msualg\_1 X0 X2 = k1\_xtuple\_0 \\ & X2) \wedge (m1\_abcmiz\_1 X1 X0 (k2\_msualg\_1 X0 X2))))))) \end{aligned}$$