

# t81\_mcart\_1 (TMWM- rNW88XSpmVzkNQ2WyqXYsvEyyAWc9zs)

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Let  $k6\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (k3\_xtuple\_0\ X0\ X1\ X2 \in k3\_zfmisc\_1\ X3\ X4\ X5) \Leftrightarrow ((X0 \in X3) \wedge ((X1 \in X4) \wedge \\ & \quad (X2 \in X5))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \neg (X0 \in k3\_zfmisc\_1 \\ & X1\ X2\ X3) \wedge (\forall X4. \forall X5. \forall X6. \neg (X4 \in X1) \wedge ((X5 \in X2) \wedge \\ & \quad ((X6 \in X3) \wedge (X0 = k3\_xtuple\_0\ X4\ X5\ X6)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. k6\_xtuple\_0\ X0\ X1 \\ & X2\ X3 = k4\_tarski\ (k3\_xtuple\_0\ X0\ X1\ X2)\ X3 \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. k4\_zfmisc\_1\ X0\ X1 \\ & X2\ X3 = k2\_zfmisc\_1\ (k3\_zfmisc\_1\ X0\ X1\ X2)\ X3 \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k2\_zfmisc\_1\ X0\ X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow (\exists X4. \exists X5. (X4 \in X0) \wedge ((X5 \in X1) \wedge (X3 = k4\_tarski \\ & \quad X4\ X5)))) \end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (\forall X5. \\ & (X5 \in X0) \Leftrightarrow (\exists X6. \exists X7. \exists X8. \exists X9. (X6 \in X1) \wedge \\ & ((X7 \in X2) \wedge ((X8 \in X3) \wedge ((X9 \in X4) \wedge (X5 = k6\_xtuple\_0\ X6\ X7\ X8\ X9)))))) \Rightarrow \\ & (X0 = k4\_zfmisc\_1\ X1\ X2\ X3\ X4) \end{aligned}$$