

t72_mcart_1

(TMU7WptrRRtb4YqvhjNYpcW2Qy7agvcNqRr)

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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 $k3_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \neg(X0 \in k3_zfmisc_1 \\ & X1 X2 X3) \wedge (\forall X4. \forall X5. \forall X6. \neg(X4 \in X1) \wedge ((X5 \in X2) \wedge \\ & ((X6 \in X3) \wedge (X0 = k3_xtuple_0 X4 X5 X6)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. (m1_subset_1 X3 (k3_zfmisc_1 \\ & X0 X1 X2)) \Rightarrow (\forall X4. \forall X5. \forall X6. (X3 = k3_xtuple_0 \\ & X4 X5 X6) \Rightarrow ((k1_mcart_1 X0 X1 X2 X3 = X4) \wedge ((k2_mcart_1 X0 X1 X2 X3 = X5) \wedge \\ & (k3_mcart_1 X0 X1 X2 X3 = X6))))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. ((\neg v1_xboole_0 X3) \wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 X0))) \Rightarrow (\forall X4. ((\neg v1_xboole_0 \\ & X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 X1))) \Rightarrow (\forall X5. ((\neg v1_xboole_0 \\ & X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 X2))) \Rightarrow (\forall X6. (m1_subset_1 \\ & X6 (k3_zfmisc_1 X0 X1 X2)) \Rightarrow ((X6 \in k3_zfmisc_1 X3 X4 X5) \Rightarrow ((k1_mcart_1 \\ & X0 X1 X2 X6 \in X3) \wedge ((k2_mcart_1 X0 X1 X2 X6 \in X4) \wedge (k3_mcart_1 X0 X1 X2 \\ & X6 \in X5)))))))))) \end{aligned}$$