

t11_domain_1 (TMYPZMqxc- cvVrz5vWVjKHnqMTZihvwbD1ez)

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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 $k6_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (\forall X5. \\ & (X5 \in X0) \Leftrightarrow (\exists X6. \exists X7. \exists X8. \exists X9. (X6 \in X1) \wedge \\ & ((X7 \in X2) \wedge ((X8 \in X3) \wedge ((X9 \in X4) \wedge (X5 = k6_xtuple_0 X6 X7 X8 X9)))))) \Rightarrow \\ & (X0 = k4_zfmisc_1 X1 X2 X3 X4) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. k4_zfmisc_1 X0 X1 \\ & X2 X3 = k2_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2) X3 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee \\ & (X0 \in X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow \\ & (X1 \in X0))) \wedge ((v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow (v1_xboole_0 \\ & X1))) \end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. (\neg v1_xboole_0 X3) \Rightarrow \\ & (\forall X4. (\neg v1_xboole_0 X4) \Rightarrow ((\forall X5. (X5 \in X0) \Leftrightarrow (\exists X6. \\ & (m1_subset_1 X6 X1) \wedge (\exists X7. (m1_subset_1 X7 X2) \wedge (\exists X8. \\ & (m1_subset_1 X8 X3) \wedge (\exists X9. (m1_subset_1 X9 X4) \wedge (X5 = k6_xtuple_0 \\ & X6 X7 X8 X9)))))) \Rightarrow (X0 = k4_zfmisc_1 X1 X2 X3 X4)))))) \end{aligned}$$