

t15_chain_1

(TML9gSbPK4pWWBzpZsBmvSuD6QynGku8rZc)

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Let $v1_zfmisc.1 : \iota \Rightarrow o$ be given. Let $v1_finset.1 : \iota \Rightarrow o$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal.0 : \iota \Rightarrow o$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $v1_xreal.0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset.1 X1 (k1_zfmisc.1 X2))) \Rightarrow (m1_subset.1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xreal.0 X0) \Rightarrow (\forall X1. (v1_xreal.0 X1) \Rightarrow ((r1_xxreal.0 X0 X1) \wedge (r1_xxreal.0 X1 X0)) \Rightarrow (X0 = X1)) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole.0 X0) \wedge ((v1_finset.1 X0) \wedge (m1_subset.1 X0 (k1_zfmisc.1 k1_numbers)))) \Rightarrow (\exists X1. (m1_subset.1 X1 k1_numbers) \wedge ((X1 \in X0) \wedge (\forall X2. (m1_subset.1 X2 k1_numbers) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal.0 X1 X2))))) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole.0 X0) \wedge ((v1_finset.1 X0) \wedge (m1_subset.1 X0 (k1_zfmisc.1 k1_numbers)))) \Rightarrow (\exists X1. (m1_subset.1 X1 k1_numbers) \wedge ((X1 \in X0) \wedge (\forall X2. (m1_subset.1 X2 k1_numbers) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal.0 X2 X1))))) \quad (4)$$

Assume the following.

$$\forall X0. (v1_zfmisc.1 X0) \Leftrightarrow (\forall X1. \forall X2. ((X1 \in X0) \wedge (X2 \in X0)) \Rightarrow (X1 = X2)) \quad (5)$$

Assume the following.

$$\forall X0. (v1_xreal.0 X0) \Rightarrow (v1_xxreal.0 X0) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_zfmisc_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_zfmisc_1 X0) \wedge ((v1_finset_1 X0) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\exists X1.(m1_subset_1 X1 k1_numbers) \wedge \\ & (\exists X2.(m1_subset_1 X2 k1_numbers) \wedge ((X1 \in X0) \wedge ((X2 \in X0) \wedge \\ & ((\neg r1_xxreal_0 X1 X2) \wedge (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow \\ & ((X3 \in X0) \Rightarrow ((r1_xxreal_0 X2 X3) \wedge (r1_xxreal_0 X3 X1)))))))))) \end{aligned}$$