

t22_chain_1

(TMRPPo7Ae3rUuWTajEk5eFzEqw6UuCNiiXf)

October 27, 2020

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 $m2_chain_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_zfmisc_1 X0) \wedge ((v1_finset_1 X0) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow ((m2_chain_1 (k1_domain_1 \\ & k1_numbers k1_numbers X1 X2) X0) \Leftrightarrow ((X1 \in X0) \wedge ((X2 \in X0) \wedge ((\neg r1_xxreal_0 \\ & X2 X1) \wedge (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow (\neg (X3 \in X0) \wedge (\neg r1_xxreal_0 X3 X1) \wedge (\neg r1_xxreal_0 X2 X3)))))) \vee ((\neg r1_xxreal_0 \\ & X1 X2) \wedge (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow ((X3 \in X0) \Rightarrow ((r1_xxreal_0 \\ & X3 X1) \wedge (r1_xxreal_0 X2 X3)))))))))) \quad (2) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow ((r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (4)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_zfmisc_1 X0) \wedge (v1_finset_1 X0) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers))) \Rightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow (((m2_chain_1 \\ & (k1_domain_1 k1_numbers k1_numbers X2 X1) X0) \wedge (m2_chain_1 (k1_domain_1 \\ & k1_numbers k1_numbers X4 X3) X0)) \Rightarrow ((r1_xreal_0 X2 X1) \vee ((r1_xreal_0 \\ & X4 X3) \vee ((X2 = X4) \wedge (X1 = X3)))))))))) \end{aligned}$$