

t54_prob_3 (TMMyk-
bLnH3ViJCqBKCq5WA6wS2uTZHJc7M8)

October 27, 2020

Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_prob_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_relat_1 X2) \wedge (v1_funct_1 \\ & X2)) \Rightarrow (((k9_xtuple_0 X2 = X0) \wedge (\forall X3.(X3 \in X0) \Rightarrow (k1_funct_1 \\ & X2 X3 \in X1))) \Rightarrow ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0 : \iota \Rightarrow \iota.\forall X1 : \iota \Rightarrow \iota.\forall X2 : \iota \Rightarrow o. \\ & \forall X3.\exists X4.((v1_relat_1 X4) \wedge (v1_funct_1 X4) \wedge ((k9_xtuple_0 \\ & X4 = X3) \wedge (\forall X5.(X5 \in X3) \Rightarrow (((X2 X5) \Rightarrow (k1_funct_1 X4 X5 = X1 X5)) \wedge \\ & ((\neg X2 X5) \Rightarrow (k1_funct_1 X4 X5 = X0 X5)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0. k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_finseq_1 X1 (k9_setfam_1 X0)) \wedge (v7_ordinal1 X2)) \Rightarrow (k4_prob_3 X0 X1 X2 = k1_funct_1 X1 X2) \quad (8)$$

Assume the following.

$$\forall X0. \exists X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (v1_xboole_0 X1) \quad (9)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_finseq_1 X1 (k9_setfam_1 X0)) \wedge (v7_ordinal1 X2)) \Rightarrow (m1_subset_1 (k4_prob_3 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (11)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Leftrightarrow (X0 \in k4_ordinal1) \quad (12)$$

Theorem 1

$$\forall X0. \forall X1. (m2_finseq_1 X1 (k9_setfam_1 X0)) \Rightarrow (\exists X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k9_setfam_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0)))))) \wedge ((\forall X3. (v7_ordinal1 X3) \Rightarrow ((X3 \in k1_relset_1 k5_numbers X1) \Rightarrow (k1_funct_1 X2 X3 = k4_prob_3 X0 X1 X3))) \wedge (\forall X3. (v7_ordinal1 X3) \Rightarrow ((\neg X3 \in k1_relset_1 k5_numbers X1) \Rightarrow (k1_funct_1 X2 X3 = k1_xboole_0))))))$$