

t39_prob_3

(TMSM61W2hK34NMFqyJfytuPqazudFs9oZXF)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_valued_0 : \iota \Rightarrow o$ be given. Let $k3_series_1 : \iota \Rightarrow \iota$ be given. Let $k8_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\\ \forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_prob_1 X2 X1) \wedge ((v4_prob_1 \\ X2 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X1)))))) \Rightarrow (\forall X3. \\ ((v5_relat_1 X3 X2) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers \\ (k9_setfam_1 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ k5_numbers (k9_setfam_1 X1)))))) \Rightarrow (\forall X4.(m2_prob_1 X4 \\ X1 X2) \Rightarrow (r1_xxreal_0 k6_numbers (k1_funct_1 (k8_prob_1 X1 X2 X3 \\ X4) X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\ ((\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (r1_xxreal_0 \\ k6_numbers (k3_funct_2 k5_numbers k1_numbers X0 X1))) \Rightarrow (v7_valued_0 \\ (k3_series_1 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (6)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.(m2_prob_1 X2 X0 X1) \Rightarrow ((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 X1 k1_numbers) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X1 k1_numbers)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1_xboole_0 \\ & X1) \wedge ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \wedge (((v5_relat_1 X2 X1) \wedge ((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 k5_numbers (k9_setfam_1 X0) \wedge (m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0)))))) \wedge \\ & ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X1 k1_numbers) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X1 k1_numbers)))))) \Rightarrow ((v1_funct_1 \\ & k8_prob_1 X0 X1 X2 X3) \wedge ((v1_funct_2 (k8_prob_1 X0 X1 X2 X3) k5_numbers \\ & k1_numbers) \wedge (m1_subset_1 (k8_prob_1 X0 X1 X2 X3) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers k1_numbers)))))) \end{aligned} \quad (9)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v5_relat_1 X2 X1) \wedge ((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 k5_numbers (k9_setfam_1 X0)) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0)))))) \Rightarrow \\ & (\forall X3.(m2_prob_1 X3 X0 X1) \Rightarrow (v7_valued_0 (k3_series_1 (k8_prob_1 \\ & X0 X1 X2 X3)))))) \end{aligned}$$