

t13_turing_1

(TMMH DJm3BGwMXCKAPVCM1pk9NgU7R3ezjgg)

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Let $l1_turing_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_turing_1 : \iota \Rightarrow \iota$ be given. Let $k4_numbers : \iota$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_turing_1 : \iota \Rightarrow \iota$ be given. Let $v2_turing_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k1_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_turing_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u5_turing_1 : \iota \Rightarrow \iota$ be given. Let $k11_turing_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0 : \iota \Rightarrow o. (\exists X1. (v7_ordinal1 X1) \wedge (X0 X1)) \Rightarrow (\\ \exists X1. (v7_ordinal1 X1) \wedge ((X0 X1) \wedge (\forall X2. (v7_ordinal1 \\ X2) \Rightarrow ((X0 X2) \Rightarrow (r1_xxreal_0 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0))))))\wedge(v7_ordinal1 X2))\Rightarrow(m1_subset_1 (k8_nat_1 X0 X1 X2) X0) \quad (6)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((l1_turing_1 X0)\wedge(m1_subset_1 X1 (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0))))))\Rightarrow((v1_funct_1 (k10_turing_1 X0 X1))\wedge((v1_funct_2 (k10_turing_1 X0 X1) k5_numbers (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0))))))\wedge(m1_subset_1 (k10_turing_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0)))))))) \quad (8)$$

Assume the following.

$$\forall X0.(l1_turing_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0)))))\Rightarrow((v2_turing_1 X1 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0)))))\Rightarrow((X2 = k11_turing_1 X0 X1)\Leftrightarrow(\exists X3.(m2_subset_1 X3 k1_numbers k5_numbers)\wedge((X2 = k8_nat_1 (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0))) (k10_turing_1 X0 X1) X3)\wedge(k1_mcart_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0)) (k8_nat_1 (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0))) (k10_turing_1 X0 X1) X3) = u5_turing_1 X0)))))) \quad (9)$$

Assume the following.

$$\forall X0.(l1_turing_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0)))))\Rightarrow((v2_turing_1 X1 X0)\Leftrightarrow(\exists X2.(m2_subset_1 X2 k1_numbers k5_numbers)\wedge(k1_mcart_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0)) (k8_nat_1 (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0))) (k10_turing_1 X0 X1) X2) = u5_turing_1 X0)))) \quad (10)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Leftrightarrow(X0 \in k4_ordinal1) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.(l1_turing_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k3_zfmisc_1 \\ & (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 \\ & X0)))) \Rightarrow (\neg(v2_turing_1 X1 X0) \wedge (\forall X2.(m2_subset_1 X2 k1_numbers \\ & k5_numbers) \Rightarrow (\neg(k1_mcart_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 \\ & k4_numbers (u1_turing_1 X0)) (k8_nat_1 (k3_zfmisc_1 (u2_turing_1 \\ & X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0))) (k10_turing_1 \\ & X0 X1) X2) = u5_turing_1 X0) \wedge ((k11_turing_1 X0 X1 = k8_nat_1 (k3_zfmisc_1 \\ & (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 \\ & X0))) (k10_turing_1 X0 X1) X2) \wedge (\forall X3.(m2_subset_1 X3 k1_numbers \\ & k5_numbers) \Rightarrow (\neg(\neg r1_xxreal_0 X2 X3) \wedge (k1_mcart_1 (u2_turing_1 \\ & X0) k4_numbers (k9_funct_2 k4_numbers (u1_turing_1 X0)) (k8_nat_1 \\ & (k3_zfmisc_1 (u2_turing_1 X0) k4_numbers (k9_funct_2 k4_numbers \\ & (u1_turing_1 X0))) (k10_turing_1 X0 X1) X3) = u5_turing_1 X0))))))))) \end{aligned}$$