

t19_turing_1
(TMG9KRppUbfNNBAyDU9ZcgsrHJ2CaXJ8CWE)

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Let $l1_turing_1 : \iota \Rightarrow o$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_numbers : \iota$ be given. Let $u1_turing_1 : \iota \Rightarrow \iota$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r2_turing_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $np_4 : \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $r1_turing_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1_turing_1 X0) \Rightarrow (\forall X1.(m2_funct_2 X1 k4_numbers \\ & (u1_turing_1 X0) (k9_funct_2 k4_numbers (u1_turing_1 X0))) \Rightarrow (\\ & \quad \forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (\forall X3. \\ & \quad (m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow (\forall X4.(m2_subset_1 \\ & \quad X4 k1_numbers k5_numbers) \Rightarrow ((r2_turing_1 (k3_finseq_4 k5_numbers \\ & X2 X3 X4) X0 X1) \Rightarrow ((r1_turing_1 X0 X1 X2 (k2_nat_1 (k2_nat_1 X2 X3) \\ & np_2)) \wedge (r1_turing_1 X0 X1 (k2_nat_1 (k2_nat_1 X2 X3) np_2) (k2_nat_1 \\ & \quad (k2_nat_1 (k2_nat_1 X2 X3) X4) np_4)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_4) \wedge (m2_subset_1 np_4 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_4 k5_numbers) \wedge (m1_subset_1 np_4 k1_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & \quad X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (4)$$

Assume the following.

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

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k5_numbers) \wedge (v7_ordinal1 X1)) \Rightarrow (m2_subset_1 (k2_nat_1 X0 X1) k1_numbers k5_numbers) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_turing_1 X0) \Rightarrow (\forall X1. (m2_funct_2 X1 k4_numbers \\ & (u1_turing_1 X0) (k9_funct_2 k4_numbers (u1_turing_1 X0))) \Rightarrow (\\ & \forall X2. (v1_int_1 X2) \Rightarrow (\forall X3. (v1_int_1 X3) \Rightarrow ((r1_turing_1 \\ & X0 X1 X2 X3) \Leftrightarrow ((k1_funct_1 X1 X2 = k6_numbers) \wedge ((k1_funct_1 X1 X3 = \\ & k6_numbers) \wedge (\forall X4. (v1_int_1 X4) \Rightarrow (\neg(\neg r1_xxreal_0 X4 X2) \wedge \\ & ((\neg r1_xxreal_0 X3 X4) \wedge (k1_funct_1 X1 X4 \neq np_1)))))))))) \quad (9) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k5_numbers) \wedge (v7_ordinal1 X1)) \Rightarrow (k2_nat_1 X0 X1 = k2_nat_1 X1 X0) \quad (10)$$

Assume the following.

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

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (v1_int_1 X0) \quad (12)$$

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

$$\begin{aligned} & \forall X0.(l1_turing_1 X0) \Rightarrow (\forall X1.(m2_funct_2 X1 k4_numbers \\ & (u1_turing_1 X0) (k9_funct_2 k4_numbers (u1_turing_1 X0))) \Rightarrow (\\ & \quad \forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (\forall X3. \\ & \quad (m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow (\forall X4.(m2_subset_1 \\ & \quad X4 k1_numbers k5_numbers) \Rightarrow ((r2_turing_1 (k3_finseq_4 k5_numbers \\ & X2 X3 X4) X0 X1) \Rightarrow ((k1_funct_1 X1 X2 = k6_numbers) \wedge ((k1_funct_1 X1 \\ & (k2_nat_1 (k2_nat_1 X2 X3) np_2) = k6_numbers) \wedge ((k1_funct_1 X1 \\ & (k2_nat_1 (k2_nat_1 (k2_nat_1 X2 X3) X4) np_4) = k6_numbers) \wedge (\\ & \quad (\forall X5.(v1_int_1 X5) \Rightarrow (\neg(\neg r1_xxreal_0 X5 X2) \wedge ((\neg r1_xxreal_0 \\ & (k2_nat_1 (k2_nat_1 X2 X3) np_2) X5) \wedge (k1_funct_1 X1 X5 \neq np_1)))))) \wedge \\ & \quad (\forall X5.(v1_int_1 X5) \Rightarrow (\neg(\neg r1_xxreal_0 X5 (k2_nat_1 (k2_nat_1 \\ & X2 X3) np_2))) \wedge ((\neg r1_xxreal_0 (k2_nat_1 (k2_nat_1 (k2_nat_1 X2 \\ & X3) X4) np_4) X5) \wedge (k1_funct_1 X1 X5 \neq np_1)))))))))) \end{aligned}$$