

t54_roughs_1 (TM-
bEW7CZoffXXUknvyBeXPcnQteGYWQGYVM)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v8_struct_0 : \iota \Rightarrow o$ be given. Let $v2_roughs_1 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k6_roughs_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_roughs_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_roughs_1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v8_struct_0 X0) \wedge ((v2_roughs_1 \\ X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow ((k3_funct_2 (u1_struct_0 X0) k1_numbers (k6_roughs_1 X0 \\ X1) X2 = k6_numbers) \Leftrightarrow (X2 \in k3_subset_1 (u1_struct_0 X0) (k4_roughs_1 \\ X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.k4_xboole_0 X0 k1_xboole_0 = X0 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_roughs_1 X0) \wedge (l1_orders_2 X0))) \Rightarrow (k4_roughs_1 X0 (k1_struct_0 X0) = k1_xboole_0) \quad (5)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

$$\forall X0.\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(v1_xboole_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(k3_subset_1 X0 X1 = k4_xboole_0 X0 X1) \quad (10)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(k1_struct_0 X0 = k1_xboole_0) \quad (11)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v2_roughs_1 X0)\Rightarrow(v3_roughs_1 X0)) \quad (12)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v8_struct_0 X0)\wedge((v2_roughs_1 X0)\wedge(l1_orders_2 X0))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k3_funct_2 (u1_struct_0 X0) k1_numbers (k6_roughs_1 X0 (k1_struct_0 X0)) X1 = k6_numbers))$$