

t15_tbsp_1 (TMW- gaPMhyLEWmgpW95kUfAsPzyTpnx1rLGe)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_metric_1 : \iota \Rightarrow o$ be given. Let $v8_metric_1 : \iota \Rightarrow o$ be given. Let $v9_metric_1 : \iota \Rightarrow o$ be given. Let $l1_metric_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_tbsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k9_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ 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 $np_0 : \iota$ 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.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 (k1_tarski X0) (k1_zfmisc_1 X1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_metric_1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v6_tbsp_1 \\ X1 X0) \wedge (r1_tarski X2 X1)) \Rightarrow (v6_tbsp_1 X2 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_metric_1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow \\ ((v6_metric_1 X0) \Rightarrow ((r1_xxreal_0 X2 k6_numbers) \vee (X1 \in k9_metric_1 \\ X0 X1 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \text{ np_1}) \wedge (m2_subset_1 \text{ np_1 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_1 } k5_numbers) \wedge (m1_subset_1 \text{ np_1 } k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$v1_xboole_0 \text{ np_0} \quad (7)$$

Assume the following.

$$\neg r1_xreal_0 \text{ np_1 } \text{ np_0} \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow \\ (k6_domain_1 X0 X1 = k1_tarski X1) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v6_metric_1 \\ X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \wedge \\ ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (v1_xreal_0 X2)) \Rightarrow (v6_tbsp_1 \\ (k9_metric_1 X0 X1 X2) X0) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 \\ (u1_struct_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0. (l1_metric_1 X0) \Rightarrow (l1_struct_0 X0) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((l1_metric_1 X0) \wedge ((m1_subset_1 \\ X1 (u1_struct_0 X0)) \wedge (v1_xreal_0 X2))) \Rightarrow (m1_subset_1 (k9_metric_1 \\ X0 X1 X2) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v8_metric_1 \\ X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((X2 = k6_domain_1 (u1_struct_0 X0) X1) \Rightarrow (v6_tbsp_1 \\ X2 X0)))))) \end{aligned}$$