

t19_tbsp_1

(TMNh1xuphmvedkaWdDYjt4X6F58n5Q99K8i)

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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 $v1_tbsp_1 : \iota \Rightarrow o$ be given. Let $v5_tbsp_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v6_tbsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k9_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_metric_1 X0)) \Rightarrow ((v5_tbsp_1 X0) \Leftrightarrow (v6_tbsp_1 (k2_struct_0 X0) X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (((v1_finset_1 X1) \wedge (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((X2 \in X1) \Rightarrow (v6_tbsp_1 X2 X0)))) \Rightarrow (v6_tbsp_1 (k5_setfam_1 (u1_struct_0 X0) X1) X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (5)$$

Assume the following.

$$\neg r1_xreal_0 \ np_1 \ np_0 \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 \ X0) \wedge ((v6_metric_1 \\ & X0) \wedge ((v8_metric_1 \ X0) \wedge ((v9_metric_1 \ X0) \wedge (l1_metric_1 \ X0)))))) \wedge \\ & ((m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \wedge (v1_xreal_0 \ X2)) \Rightarrow (v6_tbsp_1 \\ & (k9_metric_1 \ X0 \ X1 \ X2) \ X0) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (l1_metric_1 \ X0) \Rightarrow (l1_struct_0 \ X0) \quad (9)$$

Assume the following.

$$\forall X0. (l1_struct_0 \ X0) \Rightarrow (k2_struct_0 \ X0 = u1_struct_0 \ X0) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 \ X0) \wedge (l1_metric_1 \ X0)) \Rightarrow ((v1_tbsp_1 \\ & X0) \Leftrightarrow (\forall X1. (m1_subset_1 \ X1 \ k1_numbers) \Rightarrow (\neg(\neg r1_xreal_0 \\ & X1 \ k6_numbers) \wedge (\forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k1_zfmisc_1 \\ & (u1_struct_0 \ X0)))) \Rightarrow (\neg(v1_finset_1 \ X2) \wedge ((u1_struct_0 \ X0 = k5_setfam_1 \\ & (u1_struct_0 \ X0) \ X2) \wedge (\forall X3. (m1_subset_1 \ X3 \ (k1_zfmisc_1 \\ & (u1_struct_0 \ X0))) \Rightarrow (\neg(X3 \in \ X2) \wedge (\forall X4. (m1_subset_1 \ X4 \ (u1_struct_0 \\ & X0)) \Rightarrow (X3 \neq k9_metric_1 \ X0 \ X4 \ X1)))))))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xreal_0 \ X0) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 \ X0) \wedge ((v6_metric_1 \ X0) \wedge ((v8_metric_1 \\ & X0) \wedge ((v9_metric_1 \ X0) \wedge (l1_metric_1 \ X0)))))) \Rightarrow ((v1_tbsp_1 \ X0) \Rightarrow \\ & (v5_tbsp_1 \ X0)) \end{aligned}$$