

l32_group_3

(TMGofbiXcvqu9QrtLnuLEcQAZGqVbZh61w1)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_group_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0 : \iota \Rightarrow o. ((X0 \ k6_numbers) \wedge (\forall X1. (v7_ordinal1 \ X1) \Rightarrow ((X0 \ X1) \Rightarrow (X0 \ (k1_nat_1 \ X1 \ np_1)))))) \Rightarrow (\forall X1. (v7_ordinal1 \ X1) \Rightarrow (X0 \ X1)) \quad (1)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7_ordinal1 \ X0) \Rightarrow ((\forall X1. ((\neg v2_struct_0 \ X1) \wedge \\ & ((v2_group_1 \ X1) \wedge ((v3_group_1 \ X1) \wedge (l3_algstr_0 \ X1)))))) \Rightarrow (\forall X2. \\ & (m1_subset_1 \ X2 \ (u1_struct_0 \ X1)) \Rightarrow (\forall X3. (m1_subset_1 \ X3 \\ & (u1_struct_0 \ X1)) \Rightarrow (k2_group_3 \ X1 \ (k5_group_1 \ X1 \ X0 \ X2) \ X3 = k5_group_1 \\ & X1 \ X0 \ (k2_group_3 \ X1 \ X2 \ X3)))))) \Rightarrow (\forall X1. ((\neg v2_struct_0 \ X1) \wedge \\ & ((v2_group_1 \ X1) \wedge ((v3_group_1 \ X1) \wedge (l3_algstr_0 \ X1)))))) \Rightarrow (\forall X2. \\ & (m1_subset_1 \ X2 \ (u1_struct_0 \ X1)) \Rightarrow (\forall X3. (m1_subset_1 \ X3 \\ & (u1_struct_0 \ X1)) \Rightarrow (k2_group_3 \ X1 \ (k5_group_1 \ X1 \ (k1_nat_1 \ X0 \ np_1) \\ & X2) \ X3 = k5_group_1 \ X1 \ (k1_nat_1 \ X0 \ np_1) \ (k2_group_3 \ X1 \ X2 \ X3)))))) \quad (3) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 \ X0) \wedge ((v2_group_1 \ X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 \ X0)))) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2. (m1_subset_1 \ X2 \ (u1_struct_0 \ X0)) \Rightarrow (k2_group_3 \\ & X0 \ (k5_group_1 \ X0 \ k1_xboole_0 \ X1) \ X2 = k5_group_1 \ X0 \ k1_xboole_0 \\ & (k2_group_3 \ X0 \ X1 \ X2)))) \quad (4) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ & ((v2_group_1\ X1) \wedge ((v3_group_1\ X1) \wedge (l3_algstr_0\ X1)))) \Rightarrow (\forall X2. \\ & (m1_subset_1\ X2\ (u1_struct_0\ X1)) \Rightarrow (\forall X3.(m1_subset_1\ X3 \\ & (u1_struct_0\ X1)) \Rightarrow (k2_group_3\ X1\ (k5_group_1\ X1\ X0\ X2)\ X3 = k5_group_1 \\ & X1\ X0\ (k2_group_3\ X1\ X2\ X3)))))) \end{aligned}$$