

t18_toprns_1
(TMJCpr5JjeaucBSUToNzub7Xys2bpPxncSj)

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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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_toprns_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_toprns_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_toprns_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 (k15_euclid \\ & X0))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (\\ & u1_struct_0 (k15_euclid X0))))))) \Rightarrow (k3_toprns_1 X0 (k3_toprns_1 \\ & X0 X1) = X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{2}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{3}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{4}$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \tag{5}$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \tag{6}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v7_ordinal1\ X0) \wedge ((v1_funct_1\ X1) \wedge ((\\ v1_funct_2\ X1\ k5_numbers\ (u1_struct_0\ (k15_euclid\ X0))) \wedge (m1_subset_1 \\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ (k15_euclid \\ X0)))))) \Rightarrow ((v1_funct_1\ (k3_toprns_1\ X0\ X1)) \wedge ((v1_funct_2\ (\\ k3_toprns_1\ X0\ X1)\ k5_numbers\ (u1_struct_0\ (k15_euclid\ X0))) \wedge \\ (m1_subset_1\ (k3_toprns_1\ X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers \\ (u1_struct_0\ (k15_euclid\ X0))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. (v7_ordinal1\ X0) \Rightarrow (\forall X1. ((v1_funct_1\ X1) \wedge ((\\ v1_funct_2\ X1\ k5_numbers\ (u1_struct_0\ (k15_euclid\ X0))) \wedge (m1_subset_1 \\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ (k15_euclid \\ X0)))))) \Rightarrow (\forall X2. ((v1_funct_1\ X2) \wedge ((v1_funct_2\ X2\ k5_numbers \\ (u1_struct_0\ (k15_euclid\ X0))) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ (k15_euclid\ X0)))))) \Rightarrow \\ (k4_toprns_1\ X0\ X1\ X2 = k1_toprns_1\ X0\ X1\ (k3_toprns_1\ X0\ X2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0. (m2_subset_1\ X0\ k1_numbers\ k5_numbers) \Rightarrow (\forall X1. \\ ((v1_funct_1\ X1) \wedge ((v1_funct_2\ X1\ k5_numbers\ (u1_struct_0\ (k15_euclid \\ X0))) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (\\ u1_struct_0\ (k15_euclid\ X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 \\ X2) \wedge ((v1_funct_2\ X2\ k5_numbers\ (u1_struct_0\ (k15_euclid\ X0))) \wedge \\ (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0 \\ (k15_euclid\ X0)))))) \Rightarrow (k4_toprns_1\ X0\ X1\ (k3_toprns_1\ X0\ X2) = \\ k1_toprns_1\ X0\ X1\ X2))) \end{aligned}$$