

t4_gobrd10
(TMQ4vDMn8Sbh6x87u75LGrE3P26XPaYMaG2)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $r2_gobrd10 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_gobrd10 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k5_numbers) \Rightarrow (((r1_gobrd10 X0 X1) \wedge ((r1_xxreal_0 np_1 X0) \wedge \\ (r1_xxreal_0 np_1 X1))) \Rightarrow (r1_gobrd10 (k7_nat_d X0 np_1) (k7_nat_d \\ X1 np_1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (\\ m1_subset_1 (k7_nat_d X0 X1) k5_numbers) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k5_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 k5_numbers) \Rightarrow ((r2_gobrd10 X0 X1 X2 X3) \Leftrightarrow (((r1_gobrd10 \\ X0 X2) \wedge (X1 = X3)) \vee ((X0 = X2) \wedge (r1_gobrd10 X1 X3))))))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k5_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k5_numbers) \Rightarrow (((r2_gobrd10 X0 X2 X1 X3) \wedge ((r1_xxreal_0 \\ & np_1 X0) \wedge ((r1_xxreal_0 np_1 X1) \wedge ((r1_xxreal_0 np_1 X2) \wedge (r1_xxreal_0 \\ & np_1 X3)))))) \Rightarrow (r2_gobrd10 (k7_nat_d X0 np_1) (k7_nat_d X2 np_1) \\ & (k7_nat_d X1 np_1) (k7_nat_d X3 np_1)))))) \end{aligned}$$