

t21_dist_1 (TMYzmCN-
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Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_dist_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $k4_dist_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (5)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (m1_subset_1 (k4_finseq_1 X0) (k1_zfmisc_1 k5_numbers)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_finset_1 X0)\wedge(m1_finseq_1 X1 X0))\Rightarrow (m2_finseq_1 (k4_dist_1 X0 X1) k1_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_finset_1 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow \\ ((v1_dist_1 X1 X0)\Leftrightarrow(\forall X2.(v7_ordinal1 X2)\Rightarrow((X2 \in k4_finseq_1 \\ (k4_dist_1 X0 X1))\Rightarrow(k1_funct_1 (k4_dist_1 X0 X1) X2 = k12_binop_2 \\ np_1 (k5_card_1 X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v3_funct_1 X0)\Leftrightarrow \\ (\forall X1.\forall X2.((X1 \in k9_xtuple_0 X0)\wedge(X2 \in k9_xtuple_0 \\ X0))\Rightarrow(k1_funct_1 X0 X1 = k1_funct_1 X0 X2))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (10)$$

Theorem 1

$$\forall X0.(v1_finset_1 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow ((v1_dist_1 X1 X0)\Rightarrow(v3_funct_1 (k4_dist_1 X0 X1))))$$