

t22_dist_1 (TMZSFHrGKLtyuL- Wwc6j9W4Pv1v62uzDmRsn)

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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 $r1_dist_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_dist_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ & (\forall X2.(m2_finseq_1 X2 X0) \Rightarrow ((r1_dist_1 X0 X1 X2) \Leftrightarrow (k4_dist_1 \\ & X0 X1 = k4_dist_1 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ & ((v1_dist_1 X1 X0) \Leftrightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow ((X2 \in k4_finseq_1 \\ & (k4_dist_1 X0 X1)) \Rightarrow (k1_funct_1 (k4_dist_1 X0 X1) X2 = k12_binop_2 \\ & np_1 (k5_card_1 X0)))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ & (\forall X2.(m2_finseq_1 X2 X0) \Rightarrow (((v1_dist_1 X1 X0) \wedge (r1_dist_1 \\ & X0 X1 X2)) \Rightarrow (v1_dist_1 X2 X0)))) \end{aligned}$$