

t4_prvect_2 (TMRWLdm- CioYVC4PwsbvdKx8wfFs9znFogAH)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $m1_prvect_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\ & X1))) \Rightarrow ((k3_finseq_1 X0 = k3_finseq_1 X1) \Leftrightarrow (k1_relset_1 k5_numbers \\ & X0 = k1_relset_1 k5_numbers X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((m1_prvect_2 X2 X0 X1) \Leftrightarrow ((\\ & k9_xtuple_0 X2 = k9_xtuple_0 X0) \wedge (\forall X3.(X3 \in k9_xtuple_0 \\ & X0) \Rightarrow ((v1_funct_1 (k1_funct_1 X2 X3)) \wedge ((v1_funct_2 (k1_funct_1 \\ & X2 X3) (k2_zfmisc_1 X1 (k1_funct_1 X0 X3)) (k1_funct_1 X0 X3)) \wedge (\\ & m1_subset_1 (k1_funct_1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X1 (k1_funct_1 X0 X3)) (k1_funct_1 X0 X3)))))))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 X0) \wedge \\ & (v1_finseq_1 X0)))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v2_relat_1 X1) \wedge ((v1_funct_1 \\ & X1) \wedge ((\neg v1_xboole_0 X1) \wedge (v1_finseq_1 X1)))))) \Rightarrow (\forall X2. ((\\ & v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2))) \Rightarrow ((m1_prvect_2 \\ X2 \ X1 \ X0) \Leftrightarrow ((k3_finseq_1 X2 = k3_finseq_1 X1) \wedge (\forall X3. (X3 \in k4_finseq_1 \\ X1) \Rightarrow ((v1_funct_1 (k1_funct_1 X2 \ X3)) \wedge ((v1_funct_2 (k1_funct_1 \\ X2 \ X3) (k2_zfmisc_1 X0 (k1_funct_1 X1 \ X3)) (k1_funct_1 X1 \ X3)) \wedge (\\ m1_subset_1 (k1_funct_1 X2 \ X3) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ X0 (k1_funct_1 X1 \ X3)) (k1_funct_1 X1 \ X3)))))))))) \end{aligned}$$