

t29_pnproc_1
(TMasnZeNP4L8KZLAaeaGXT1FxyZHH7VrhLM)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $r2_pnproc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_pnproc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_pnproc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_pnproc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 k5_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& ((r2_pnproc_1 X0 X1 X2) \Rightarrow (r1_pnproc_1 X0 X2 (k2_pnproc_1 X0 (k3_pnproc_1 \\
& X0 X2 X1) X1))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 k5_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& ((r2_pnproc_1 X0 X1 X2) \Rightarrow (r2_pnproc_1 X0 (k3_pnproc_1 X0 X2 X1) X2)))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 k5_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 k5_numbers) \wedge \\
& (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& ((r2_pnproc_1 X0 X1 X2) \Rightarrow (r1_pnproc_1 X0 (k3_pnproc_1 X0 (k2_pnproc_1 \\
& X0 X2 X3) X1) (k2_pnproc_1 X0 (k3_pnproc_1 X0 X2 X1) X3))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 k5_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (r1_pnproc_1 X0 (k3_pnproc_1 X0 (k2_pnproc_1 X0 X1 X2) X2) X1))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\
& X1 X0 k5_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\
& k5_numbers)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& ((r1_pnproc_1 X0 X1 X2) \Leftrightarrow (X1 = X2))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\
& X1 X0 k5_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\
& k5_numbers)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (k2_pnproc_1 X0 X1 X2 = k1_valued_1 X1 X2)
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\
& X1 X0 k5_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\
& k5_numbers)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& ((v1_funct_1 (k3_pnproc_1 X0 X1 X2)) \wedge ((v1_funct_2 (k3_pnproc_1 \\
& X0 X1 X2) X0 k5_numbers) \wedge (m1_subset_1 (k3_pnproc_1 X0 X1 X2) (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 k5_numbers))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\
& X1 X0 k5_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\
& k5_numbers)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& ((v1_funct_1 (k2_pnproc_1 X0 X1 X2)) \wedge ((v1_funct_2 (k2_pnproc_1 \\
& X0 X1 X2) X0 k5_numbers) \wedge (m1_subset_1 (k2_pnproc_1 X0 X1 X2) (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 k5_numbers))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\
& X1 X0 k5_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\
& k5_numbers)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (k2_pnproc_1 X0 X1 X2 = k2_pnproc_1 X0 X2 X1)
\end{aligned} \tag{9}$$

Theorem 1

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 k5_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k5_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 k5_numbers) \wedge \\
& (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 k5_numbers)))))) \Rightarrow \\
& (((r2_pnproc_1 X0 X1 X2) \wedge (r2_pnproc_1 X0 X2 X3)) \Rightarrow (r1_pnproc_1 \\
& X0 (k3_pnproc_1 X0 X3 (k3_pnproc_1 X0 X2 X1)) (k2_pnproc_1 X0 (k3_pnproc_1 \\
& X0 X3 X2) X1))))
\end{aligned}$$