

l17_glib_002

(TMTTcx5kUrmnNtdVbwGsjLCBNHZbzwWCHAH)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_glib_000 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $m3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_glib_002 : \iota \Rightarrow o$ be given. Let $k7_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ X1 X0) \Rightarrow (\forall X2.(m3_glib_001 X2 X0) \Rightarrow (\forall X3.\forall X4. \\ \forall X5.((r1_glib_001 X0 X3 X4 X1) \wedge (r1_glib_001 X0 X4 X5 X2)) \Rightarrow \\ (r1_glib_001 X0 X3 X5 (k7_glib_001 X0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ X1 X0) \Rightarrow (\forall X2.\forall X3.(r1_glib_001 X0 X2 X3 X1) \Leftrightarrow (r1_glib_001 \\ X0 X3 X2 (k6_glib_001 X0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v1_relat_1 X0) \wedge ((v4_relat_1 \\ X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 \\ X0)))))) \wedge ((m3_glib_001 X1 X0) \wedge (m3_glib_001 X2 X0)) \Rightarrow (m3_glib_001 \\ (k7_glib_001 X0 X1 X2) X0) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m3_glib_001 \\ X1 X0) \Rightarrow (m3_glib_001 (k6_glib_001 X0 X1) X0) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\
& X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow ((v1_glib_002 X0) \Leftrightarrow \\
& (\forall X1.(m1_subset_1 X1 (k6_glib_000 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (k6_glib_000 X0)) \Rightarrow (\exists X3.(m3_glib_001 X3 X0) \wedge (r1_glib_001 \\
& X0 X1 X2 X3)))))) \tag{5}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\
& X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow ((\exists X1.(m1_subset_1 \\
& X1 (k6_glib_000 X0)) \wedge (\forall X2.(m1_subset_1 X2 (k6_glib_000 \\
& X0)) \Rightarrow (\exists X3.(m3_glib_001 X3 X0) \wedge (r1_glib_001 X0 X1 X2 X3)))))) \Rightarrow \\
& (v1_glib_002 X0)
\end{aligned}$$