

l60_waybel_4

(TMHdPCZ4EDno7JvhafCUZ27pfWrvdbf2Bcy)

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Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v12_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $k7_waybel_0 : \iota \Rightarrow \iota$ be given. Let $k11_waybel_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. r1_tarski (k3_xboole_0 X0 X1) X0 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\ & ((v5_orders_2 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \wedge \\ & (\neg v1_xboole_0 X1) \wedge ((v1_waybel_0 X1 X0) \wedge ((v12_waybel_0 X1 X0) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow ((v1_funct_1 \\ & (k11_waybel_4 X0 X1)) \wedge ((v1_funct_2 (k11_waybel_4 X0 X1) (u1_struct_0 \\ & X0) (u1_struct_0 (k2_yellow_1 (k7_waybel_0 X0)))) \wedge (m1_subset_1 \\ & (k11_waybel_4 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) \\ & (u1_struct_0 (k2_yellow_1 (k7_waybel_0 X0))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& \quad X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\neg \\
& v1_xboole_0 X1) \wedge ((v1_waybel_0 X1 X0) \wedge ((v12_waybel_0 X1 X0) \wedge (\\
& \quad m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (\forall X2. \\
& ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\
& \quad (k2_yellow_1 (k7_waybel_0 X0)))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& \quad (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 (k2_yellow_1 (k7_waybel_0 \\
& \quad X0)))))) \Rightarrow ((X2 = k11_waybel_4 X0 X1) \Leftrightarrow (\forall X3.(m1_subset_1 \\
& \quad X3 (u1_struct_0 X0) \Rightarrow ((r3_orders_2 X0 X3 (k1_yellow_0 X0 X1)) \Rightarrow \\
& \quad (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 (k2_yellow_1 (k7_waybel_0 \\
& \quad X0))) X2 X3 = k9_subset_1 (u1_struct_0 X0) (k5_waybel_0 X0 X3) X1)) \wedge \\
& \quad ((\neg r3_orders_2 X0 X3 (k1_yellow_0 X0 X1)) \Rightarrow (k3_funct_2 (u1_struct_0 \\
& \quad X0) (u1_struct_0 (k2_yellow_1 (k7_waybel_0 X0))) X2 X3 = k5_waybel_0 \\
& \quad X0 X3))))))))) \\
& \hspace{20em} (5)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& \quad X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\
& \quad X1 (u1_struct_0 X0) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_waybel_0 \\
& X2 X0) \wedge ((v12_waybel_0 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\
& \quad X0)))))) \Rightarrow (r1_tarski (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& \quad (k2_yellow_1 (k7_waybel_0 X0))) (k11_waybel_4 X0 X2) X1) (k5_waybel_0 \\
& \quad X0 X1))))))
\end{aligned}$$