

t42_waybel27
(TMZ5Kk6tYVwgms7Q3fepCpvft6c5GjpifpF)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. 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 $l1_orders_2 : \iota \Rightarrow o$ be given. Let $r5_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_waybel27 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_yellow_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_waybel27 : \iota \Rightarrow o$ be given. Let $v23_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\ & ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge (l1_orders_2 \\ & X1)))))) \Rightarrow (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v3_orders_2 X2) \wedge (\\ & (v4_orders_2 X2) \wedge ((v5_orders_2 X2) \wedge (l1_orders_2 X2)))))) \Rightarrow (\exists X3. \\ & ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 (k2_waybel27 X1 \\ & (k6_yellow_1 X0 X2))) (u1_struct_0 (k6_yellow_1 X0 (k2_waybel27 \\ & X1 X2)))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & (k2_waybel27 X1 (k6_yellow_1 X0 X2))) (u1_struct_0 (k6_yellow_1 \\ & X0 (k2_waybel27 X1 X2)))))) \wedge ((v3_waybel27 X3) \wedge (v23_waybel_0 \\ & X3 (k2_waybel27 X1 (k6_yellow_1 X0 X2)) (k6_yellow_1 X0 (k2_waybel27 \\ & X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v5_orders_2 X1) \wedge \\ & (l1_orders_2 X1))) \Rightarrow ((v1_orders_2 (k6_yellow_1 X0 X1)) \wedge (v5_orders_2 \\ & (k6_yellow_1 X0 X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge \\ & (l1_orders_2 X1))) \Rightarrow ((v1_orders_2 (k6_yellow_1 X0 X1)) \wedge (v3_orders_2 \\ & (k6_yellow_1 X0 X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\Rightarrow ((\neg v2_struct_0 (k6_yellow_1 X0 X1))\wedge(v1_orders_2 (k6_yellow_1 X0 X1))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X1)\Rightarrow((v1_orders_2 (k6_yellow_1 X0 X1))\wedge(l1_orders_2 (k6_yellow_1 X0 X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\wedge((\neg v2_struct_0 X1)\wedge((v3_orders_2 X1)\wedge((v5_orders_2 X1)\wedge(l1_orders_2 X1))))))\Rightarrow((v1_orders_2 (k2_waybel27 X0 X1))\wedge(l1_orders_2 (k2_waybel27 X0 X1))) \quad (6)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(l1_orders_2 X1)\Rightarrow(((r5_waybel_1 X0 X1)\Leftrightarrow(\exists X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\wedge(v23_waybel_0 X2 X0 X1)))))) \quad (7)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v3_orders_2 X1)\wedge((v4_orders_2 X1)\wedge((v5_orders_2 X1)\wedge(l1_orders_2 X1))))))\Rightarrow(\forall X2.((\neg v2_struct_0 X2)\wedge((v3_orders_2 X2)\wedge((v4_orders_2 X2)\wedge((v5_orders_2 X2)\wedge(l1_orders_2 X2))))))\Rightarrow(r5_waybel_1 (k2_waybel27 X1 (k6_yellow_1 X0 X2)) (k6_yellow_1 X0 (k2_waybel27 X1 X2))))$$