

t15_pcs_0
(TMYiR82iZBtyzVsS7m53m7aucKo9t7kPJi5)

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Let $l2_pcs_0 : \iota \Rightarrow o$ be given. Let $k18_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g2_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $u1_pcs_0 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k6_afinsq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v16_pcs_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v12_pcs_0 : \iota \Rightarrow o$ be given. Let $k17_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(l2_pcs_0 X0) \Rightarrow (\forall X1.(l2_pcs_0 X1) \Rightarrow ((u1_struct_0 \\ & (k18_pcs_0 X0 X1) = k2_xboole_0 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge \\ & ((u1_orders_2 (k18_pcs_0 X0 X1) = k2_pcs_0 (u1_struct_0 X0) (u1_struct_0 \\ & X0) (u1_struct_0 X1) (u1_struct_0 X1) (u1_orders_2 X0) (u1_orders_2 \\ & X1)) \wedge (u1_pcs_0 (k18_pcs_0 X0 X1) = k2_pcs_0 (u1_struct_0 X0) (u1_struct_0 \\ & X0) (u1_struct_0 X1) (u1_struct_0 X1) (u1_pcs_0 X0) (u1_pcs_0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k6_afinsq_1 X0 X1)) \wedge (v1_funct_1 (k6_afinsq_1 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((l2_pcs_0 X0) \wedge (l2_pcs_0 X1)) \Rightarrow (v16_pcs_0 (k6_afinsq_1 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.v1_partfun1 (k6_afinsq_1 X0 X1) (k2_tarski k6_numbers np_1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.v4_relat_1 (k6_afinsq_1 X0 X1) (k2_tarski k6_numbers np_1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((l2_pcs_0 X0)\wedge(l2_pcs_0 X1))\Rightarrow(l2_pcs_0 (k18_pcs_0 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge(v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge(v16_pcs_0 X1))))\Rightarrow((v12_pcs_0 (k17_pcs_0 X0 X1))\wedge(l2_pcs_0 (k17_pcs_0 X0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.(l2_pcs_0 X0)\Rightarrow(\forall X1.(l2_pcs_0 X1)\Rightarrow(k18_pcs_0 X0 X1 = k17_pcs_0 (k2_tarski k6_numbers np_1) (k6_afinsq_1 X0 X1))) \quad (8)$$

Assume the following.

$$\forall X0.(l2_pcs_0 X0)\Rightarrow((v12_pcs_0 X0)\Rightarrow(X0 = g2_pcs_0 (u1_struct_0 X0) (u1_orders_2 X0) (u1_pcs_0 X0))) \quad (9)$$

Theorem 1

$$\forall X0.(l2_pcs_0 X0)\Rightarrow(\forall X1.(l2_pcs_0 X1)\Rightarrow(k18_pcs_0 X0 X1 = g2_pcs_0 (k2_xboole_0 (u1_struct_0 X0) (u1_struct_0 X1)) (k2_pcs_0 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X1) (u1_struct_0 X1) (u1_orders_2 X0) (u1_orders_2 X1)) (k2_pcs_0 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X1) (u1_struct_0 X1) (u1_pcs_0 X0) (u1_pcs_0 X1))))$$