

t47_nattra_1
(TMd1KgZEHxjsPHs47bPgJ4v3YDrmh1k6Nrk)

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Let $k12_nattra_1 : \iota \Rightarrow \iota$ be given. Let $k3_cat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_cat_1 : \iota \Rightarrow o$ be given. Let $v2_cat_1 : \iota \Rightarrow o$ be given. Let $v3_cat_1 : \iota \Rightarrow o$ be given. Let $v4_cat_1 : \iota \Rightarrow o$ be given. Let $v5_cat_1 : \iota \Rightarrow o$ be given. Let $v6_cat_1 : \iota \Rightarrow o$ be given. Let $l1_cat_1 : \iota \Rightarrow o$ be given. Let $v2_nattra_1 : \iota \Rightarrow o$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v15_struct_0 : \iota \Rightarrow o$ be given. Let $g1_cat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k18_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v1_cat_1 \\ X0) \wedge ((v2_cat_1 X0) \wedge ((v3_cat_1 X0) \wedge ((v4_cat_1 X0) \wedge ((v5_cat_1 \\ X0) \wedge ((v6_cat_1 X0) \wedge (l1_cat_1 X0)))))))))) \Rightarrow ((v2_nattra_1 X0) \Rightarrow \\ (k12_nattra_1 X0 = X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. v2_nattra_1 (k3_cat_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1_cat_1 (k3_cat_1 X0 X1)) \wedge (v2_cat_1 (\\ k3_cat_1 X0 X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (\neg v2_struct_0 (k3_cat_1 X0 X1)) \wedge ((v7_struct_0 \\ (k3_cat_1 X0 X1)) \wedge ((\neg v11_struct_0 (k3_cat_1 X0 X1)) \wedge ((v15_struct_0 \\ (k3_cat_1 X0 X1)) \wedge (v1_cat_1 (k3_cat_1 X0 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1_cat_1 (k3_cat_1 X0 X1)) \wedge (l1_cat_1 (\\ k3_cat_1 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k3_cat_1 X0 X1 = g1_cat_1 (k1_tarski X0) (k1_tarski X1) (k18_funcop_1 X1 X0) (k18_funcop_1 X1 X0) (k17_funcop_1 X1 X1 X1) \quad (6)$$

Assume the following.

$$\forall X0.(l1_cat_1 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (v15_struct_0 X0))) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v4_cat_1 X0) \wedge (v6_cat_1 X0))))) \quad (7)$$

Assume the following.

$$\forall X0.(l1_cat_1 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v7_struct_0 X0) \wedge (\neg v11_struct_0 X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v3_cat_1 X0) \wedge (v5_cat_1 X0))))) \quad (8)$$

Theorem 1 $\forall X0.\forall X1.k12_nattr_1 (k3_cat_1 X0 X1) = k3_cat_1 X0 X1.$