t4_gr_cy_2 (TMNagieiQu5gnbYbnHhFa1wtgJTXn2Reba2)

October 27, 2020

Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_group\_1 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_group\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_gr\_cy\_1 : \iota \Rightarrow o$ be given. Let $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v15\_algstr\_0 : \iota \Rightarrow o$ be given. Let $g3\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow (\forall X1.(m1\_group\_2\ X1\ X0) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X1)) \Rightarrow ((X2 = X3) \Rightarrow (k5\_group\_4\ X0\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ X2) = k5\_group\_4\ X1\ (k6\_domain\_1\ (u1\_struct\_0\ X1)\ X3))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (r1\_struct\_0\ (k5\_group\_4\ X0\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ X1))\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_struct\_0\ X0)) \Rightarrow (\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0))) \Rightarrow (\forall X1.(m1\_group\_2\ X1\ X0) \Rightarrow ((\neg v2\_struct\_0\ X1) \wedge ((v2\_group\_1\ X1) \wedge (l3\_algstr\_0\ X1)))) \tag{5}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0) \Rightarrow (l1\_struct\_0\ X0) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X1\ X0)) \Rightarrow (m1\_subset\_1\ (k6\_domain\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow ((v15\_algstr\_0\ (k5\_group\_4\ X0\ X1)) \wedge (m1\_group\_2\ (k5\_group\_4\ X0\ X1)\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow ((v1\_gr\_cy\_1\ X0) \Leftrightarrow (\exists X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (g3\_algstr\_0\ (u1\_struct\_0\ X0)\ (u2\_algstr\_0\ X0) = k5\_group\_4\ X0\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ X1)))) \tag{9}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0) \Rightarrow (\forall X1.(r1\_struct\_0\ X0\ X1) \Leftrightarrow (X1 \in u1\_struct\_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow (\forall X1.(m1\_group\_2\ X1\ X0) \Rightarrow (v3\_group\_1\ X1)) \tag{11}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0) \Rightarrow ((v15\_algstr\_0\ X0) \Rightarrow (X0 = g3\_algstr\_0\ (u1\_struct\_0\ X0)\ (u2\_algstr\_0\ X0))) \tag{12}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow ((\neg v2\_struct\_0\ (k5\_group\_4\ X0\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ X1))) \wedge ((v2\_group\_1\ (k5\_group\_4\ X0\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ X1))) \wedge ((v3\_group\_1\ (k5\_group\_4\ X0\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ X1))) \wedge ((v1\_gr\_cy\_1\ (k5\_group\_4\ X0\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ X1))) \wedge (l3\_algstr\_0\ (k5\_group\_4\ X0\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ X1)))))))$$