t9_circcomb (TMKzMK7VEf54s14j1HbqdAoy6QrZ9oebus7)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_msualg\_1 : \iota \Rightarrow o$ be given. Let $v11\_struct\_0 : \iota \Rightarrow o$ be given. Let $k2\_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l5\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_msualg\_1 : \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_msualg\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_msualg\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X0) \Rightarrow (\neg v1\_xboole\_0\ (k2\_xboole\_0\ X1\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X0) \Rightarrow (\neg v1\_xboole\_0\ (k2\_xboole\_0\ X0\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_msualg\_1\ X0) \Rightarrow (l5\_struct\_0\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge (l1\_msualg\_1\ X0)) \wedge ((\neg v2\_struct\_0\ X1) \wedge (l1\_msualg\_1\ X1))) \Rightarrow ((\neg v2\_struct\_0\ (k2\_circcomb\ X0\ X1)) \wedge ((v1\_msualg\_1\ (k2\_circcomb\ X0\ X1)) \wedge (l1\_msualg\_1\ (k2\_circcomb\ X0\ X1)))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_msualg\_1\ X0)) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge (l1\_msualg\_1\ X1)) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge ((v1\_msualg\_1\ X2) \wedge (l1\_msualg\_1\ X2))) \Rightarrow ((X2 = k2\_circcomb\ X0\ X1) \Leftrightarrow ((u1\_struct\_0\ X2 = k2\_xboole\_0\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)) \wedge ((u4\_struct\_0\ X2 = k2\_xboole\_0\ (u4\_struct\_0\ X0)\ (u4\_struct\_0\ X1)) \wedge ((u1\_msualg\_1\ X2 = k1\_funct\_4\ (u1\_msualg\_1\ X0)\ (u1\_msualg\_1\ X1)) \wedge (u2\_msualg\_1\ X2 = k1\_funct\_4\ (u2\_msualg\_1\ X0)\ (u2\_msualg\_1\ X1)))))))) \tag{5}$$

Assume the following.

$$\forall X0.(l5\_struct\_0\ X0)\Rightarrow((v11\_struct\_0\ X0)\Leftrightarrow(v1\_xboole\_0\ (u4\_struct\_0\ X0))) \tag{6}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_msualg\_1\ X0))\Rightarrow(\forall X1.\ ((\neg v2\_struct\_0\ X1)\wedge(l1\_msualg\_1\ X1))\Rightarrow(\neg(\neg(v11\_struct\_0\ X0)\wedge(v11\_struct\_0\ X1))\wedge(v11\_struct\_0\ (k2\_circcomb\ X0\ X1))))$$