t8_quantal1 (TMdRzesBWvvRyMrDJgTXP-KZpG8buyM9finM)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v10\_lattices : \iota \Rightarrow o$ be given. Let $v4\_lattice3 : \iota \Rightarrow o$ be given. Let $v7\_quantal1 : \iota \Rightarrow o$ be given. Let $v8\_quantal1 : \iota \Rightarrow o$ be given. Let $l1\_quantal1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r3\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6\_lattices : \iota \Rightarrow o$ be given. Let $v8\_lattices : \iota \Rightarrow o$ be given. Let $v9\_lattices : \iota \Rightarrow o$ be given. Let $l3\_lattices : \iota \Rightarrow o$ be given. Let $r1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_lattices : \iota \Rightarrow o$ be given. Let $l2\_lattices : \iota \Rightarrow o$ be given. Let $k1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_lattices : \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v5\_lattices : \iota \Rightarrow o$ be given. Let $v7\_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v10\_lattices\ X0) \wedge ((v4\_lattice3\ X0) \wedge ((v7\_quantal1\ X0) \wedge ((v8\_quantal1\ X0) \wedge (l1\_quantal1\ X0))))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((k6\_algstr\_0\ X0\ (k3\_lattices\ X0\ X1\ X2)\ X3 = k3\_lattices\ X0\ (k6\_algstr\_0\ X0\ X1\ X3)\ (k6\_algstr\_0\ X0\ X2\ X3)) \wedge (k6\_algstr\_0\ X0\ X3\ (k3\_lattices\ X0\ X1\ X2) = k3\_lattices\ X0\ (k6\_algstr\_0\ X0\ X3\ X1)\ (k6\_algstr\_0\ X0\ X3\ X2))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((v6\_lattices\ X0) \wedge ((v8\_lattices\ X0) \wedge ((v9\_lattices\ X0) \wedge (l3\_lattices\ X0))))) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow ((r3\_lattices\ X0\ X1\ X2) \Leftrightarrow (r1\_lattices\ X0\ X1\ X2)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((v4\_lattices\ X0) \wedge (l2\_lattices\ X0))) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow (k3\_lattices\ X0\ X1\ X2 = k1\_lattices\ X0\ X1\ X2) \tag{3}$$

Assume the following.

$$\forall X0.(l3\_lattices\ X0) \Rightarrow ((l1\_lattices\ X0) \wedge (l2\_lattices\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_quantal1\ X0) \Rightarrow ((l3\_lattices\ X0) \wedge (l3\_algstr\_0\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l3\_algstr\_0\ X0) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow (m1\_subset\_1\ (k6\_algstr\_0\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l2\_lattices\ X0)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow ((r1\_lattices\ X0\ X1\ X2) \Leftrightarrow (k1\_lattices\ X0\ X1\ X2 = X2)))) \tag{7}$$

Assume the following.

$$\forall X0.(l3\_lattices\ X0) \Rightarrow (((\neg v2\_struct\_0\ X0) \wedge (v10\_lattices\ X0)) \Rightarrow ((\neg v2\_struct\_0\ X0) \wedge ((v4\_lattices\ X0) \wedge ((v5\_lattices\ X0) \wedge ((v6\_lattices\ X0) \wedge ((v7\_lattices\ X0) \wedge ((v8\_lattices\ X0) \wedge (v9\_lattices\ X0)))))))) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_group\_1\ X0) \wedge ((v10\_lattices\ X0) \wedge ((v4\_lattice3\ X0) \wedge ((v7\_quantal1\ X0) \wedge ((v8\_quantal1\ X0) \wedge (l1\_quantal1\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((r3\_lattices\ X0\ X1\ X2) \Rightarrow ((r3\_lattices\ X0\ (k6\_algstr\_0\ X0\ X1\ X3)\ (k6\_algstr\_0\ X0\ X2\ X3)) \wedge (r3\_lattices\ X0\ (k6\_algstr\_0\ X0\ X3\ X1)\ (k6\_algstr\_0\ X0\ X3\ X2)))))))$$