

t18_filter_2

(TMKW8a9UjcMhLAmDjuUCfQR8aeduWmrrpFhM)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_lattice2 : \iota \Rightarrow \iota$ be given. Let $k4_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_filter_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_filter_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_lattices : \iota \Rightarrow \iota$ be given. Let $u1_lattices : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\
 & (u1_struct_0 (k1_lattice2 X0))) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
 & (u1_struct_0 (k1_lattice2 X0))) \Rightarrow (((X1 = X3) \wedge (X2 = X4)) \Rightarrow ((k4_lattices \\
 & X0 X1 X2 = k3_lattices (k1_lattice2 X0) X3 X4) \wedge (k3_lattices X0 X1 \\
 & X2 = k4_lattices (k1_lattice2 X0) X3 X4))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge (l3_lattices X0)) \Rightarrow ((u1_struct_0 \\
 & X0 = u1_struct_0 (k1_lattice2 X0)) \wedge ((r1_funct_2 (k2_zfmisc_1 \\
 & (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0) (k2_zfmisc_1 \\
 & (u1_struct_0 (k1_lattice2 X0)) (u1_struct_0 (k1_lattice2 X0))) \\
 & (u1_struct_0 (k1_lattice2 X0)) (u2_lattices X0) (u1_lattices \\
 & (k1_lattice2 X0))) \wedge (r1_funct_2 (k2_zfmisc_1 (u1_struct_0 X0) \\
 & (u1_struct_0 X0)) (u1_struct_0 X0) (k2_zfmisc_1 (u1_struct_0 \\
 & (k1_lattice2 X0)) (u1_struct_0 (k1_lattice2 X0))) (u1_struct_0 \\
 & (k1_lattice2 X0)) (u1_lattices X0) (u2_lattices (k1_lattice2 \\
 & X0))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\
 & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k1_lattice2 \\
 & X0))) \Rightarrow (k2_filter_2 X0 X1 = X1))
 \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k1_filter_2 X0 X1 = X1)) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 (k1_lattice2 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 (k1_lattice2 X0)) \Rightarrow ((k4_lattices X0 X1 X2 = k3_lattices \\ & (k1_lattice2 X0) (k1_filter_2 X0 X1) (k1_filter_2 X0 X2)) \wedge ((k3_lattices \\ & X0 X1 X2 = k4_lattices (k1_lattice2 X0) (k1_filter_2 X0 X1) (k1_filter_2 \\ & X0 X2)) \wedge ((k4_lattices (k1_lattice2 X0) X3 X4 = k3_lattices X0 (k2_filter_2 \\ & X0 X3) (k2_filter_2 X0 X4)) \wedge (k3_lattices (k1_lattice2 X0) X3 X4 = \\ & k4_lattices X0 (k2_filter_2 X0 X3) (k2_filter_2 X0 X4)))))))))) \end{aligned}$$