

t19_filter_2

(TMX47z3RCfFZvbBLxkS4a6SyjCUfJ5xQnMX)

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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 $r3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\ & (u1_struct_0 (k1_lattice2 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\ & (u1_struct_0 (k1_lattice2 X0)) \Rightarrow (((r3_lattices (k1_lattice2 \\ & X0) X3 X4) \wedge ((X1 = X3) \wedge (X2 = X4))) \Rightarrow (r3_lattices X0 X2 X1))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r3_lattices X0 X1 X2) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 (k1_lattice2 X0)) \Rightarrow (\forall X4. \\ & (m1_subset_1 X4 (u1_struct_0 (k1_lattice2 X0)) \Rightarrow (((X1 = X3) \wedge \\ & X2 = X4) \Rightarrow (r3_lattices (k1_lattice2 X0) X4 X3))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l3_lattices X0)) \Rightarrow ((u1_struct_0 \\
& X0 = u1_struct_0 (k1_lattice2 X0)) \wedge ((r1_funct_2 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0) (k2_zfmisc_1 \\
& (u1_struct_0 (k1_lattice2 X0)) (u1_struct_0 (k1_lattice2 X0))) \\
& (u1_struct_0 (k1_lattice2 X0)) (u2_lattices X0) (u1_lattices \\
& (k1_lattice2 X0))) \wedge (r1_funct_2 (k2_zfmisc_1 (u1_struct_0 X0) \\
& (u1_struct_0 X0)) (u1_struct_0 X0) (k2_zfmisc_1 (u1_struct_0 \\
& (k1_lattice2 X0)) (u1_struct_0 (k1_lattice2 X0))) (u1_struct_0 \\
& (k1_lattice2 X0)) (u1_lattices X0) (u2_lattices (k1_lattice2 \\
& X0))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k1_lattice2 \\
& X0))) \Rightarrow (k2_filter_2 X0 X1 = X1))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k1_filter_2 \\
& X0 X1 = X1))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 (k1_lattice2 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 (k1_lattice2 X0))) \Rightarrow (((r3_lattices X0 X1 X2) \Rightarrow (r3_lattices \\
& (k1_lattice2 X0) (k1_filter_2 X0 X2) (k1_filter_2 X0 X1))) \wedge (((\\
& r3_lattices (k1_lattice2 X0) (k1_filter_2 X0 X2) (k1_filter_2 \\
& X0 X1)) \Rightarrow (r3_lattices X0 X1 X2)) \wedge (((r3_lattices (k1_lattice2 X0) \\
& X3 X4) \Rightarrow (r3_lattices X0 (k2_filter_2 X0 X4) (k2_filter_2 X0 X3))) \wedge \\
& ((r3_lattices X0 (k2_filter_2 X0 X4) (k2_filter_2 X0 X3)) \Rightarrow (r3_lattices \\
& (k1_lattice2 X0) X3 X4))))))))))
\end{aligned}$$