

t54_filter_2 (TMYztpPwfPzWDehbfRdJVcK- yyu2MZeFbXdV)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v17_lattices : \iota \Rightarrow o$ 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 $k7_lattices : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_filter_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_filter_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v17_lattices \\ X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (k7_lattices (k1_lattice2 X0) (k1_filter_2 X0 X1) = k7_lattices \\ X0 X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge \\ (l3_lattices X0))) \wedge (m1_subset_1 X1 (u1_struct_0 (k1_lattice2 \\ X0)))) \Rightarrow (m1_subset_1 (k2_filter_2 X0 X1) (u1_struct_0 X0)) \end{aligned} \tag{2}$$

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.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k1_filter_2 \\ X0 X1 = X1)) \end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v17_lattices \\ X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k1_lattice2 X0))) \Rightarrow \\ ((k7_lattices (k1_lattice2 X0) (k1_filter_2 X0 X1) = k7_lattices \\ X0 X1) \wedge (k7_lattices X0 (k2_filter_2 X0 X2) = k7_lattices (k1_lattice2 \\ X0) X2)))) \end{aligned}$$