

t68_filter_0

(TMRe29CDBeJd4gY3Gy3pTVFyyGje2DEiAZu)

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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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v19_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v20_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v3_filter_0 : \iota \Rightarrow o$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $k8_filter_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v19_lattices X1 X0) \wedge \\ & ((v20_lattices X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v3_filter_0 \\ & X0) \wedge (l3_lattices X0)))) \Rightarrow ((v3_relat_2 (k8_filter_0 X0 X1)) \wedge \\ & (v8_relat_2 (k8_filter_0 X0 X1)) \wedge (v1_partfun1 (k8_filter_0 \\ & X0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 (k8_filter_0 X0 X1) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_partfun1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (k1_relat_1 X1 = X0) \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v19_lattices X1 X0) \wedge \\ & ((v20_lattices X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v3_filter_0 \\ & X0) \wedge (l3_lattices X0)))) \Rightarrow (k1_relat_1 (k8_filter_0 X0 X1) = u1_struct_0 \\ & X0))) \end{aligned}$$