

## t26\_filter\_0

(TMJo54qDgmmahKjPkriJzft1XpYtcqnMxX5)

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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  $v13\_lattices : \iota \Rightarrow o$  be given. Let  $k5\_lattices : \iota \Rightarrow \iota$  be given. Let  $k1\_filter\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_filter\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge (l3\_lattices \\ & X0))) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge \\ & ((v13\_lattices X0) \wedge (l3\_lattices X0)))) \wedge (k5\_lattices X0 \in X1)) \Rightarrow \\ & ((k3\_filter\_0 X0 X1 = k1\_filter\_0 X0) \wedge (k3\_filter\_0 X0 X1 = u1\_struct\_0 \\ & X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge (l3\_lattices \\ & X0))) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge ((v19\_lattices X1 X0) \wedge \\ & ((v20\_lattices X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))))) \Rightarrow (k3\_filter\_0 X0 X1 = X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge (l3\_lattices X0))) \Rightarrow (k1\_filter\_0 X0 = u1\_struct\_0 X0) \tag{3}$$

### Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge (l3\_lattices \\ & X0))) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge ((v19\_lattices X1 X0) \wedge \\ & ((v20\_lattices X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))))) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge ((v13\_lattices \\ & X0) \wedge (l3\_lattices X0)))) \wedge (k5\_lattices X0 \in X1)) \Rightarrow ((X1 = k1\_filter\_0 \\ & X0) \wedge (X1 = u1\_struct\_0 X0))) \end{aligned}$$