

t33_filter_1

(TMKjdgfUySRjZeji3s2MjR1Z5oGmtChHtF5)

October 27, 2020

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 $r1_filter_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r4_wellord1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_filter_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow (\forall X2. \\ & (v1_relat_1 X2) \Rightarrow (((r4_wellord1 X0 X1) \wedge (r4_wellord1 X1 X2)) \Rightarrow (\\ & \quad r4_wellord1 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (v1_relat_1 (k8_filter_1 X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v10_lattices X1) \wedge (l3_lattices \\ & X1))) \Rightarrow ((r1_filter_1 X0 X1) \Leftrightarrow (r4_wellord1 (k8_filter_1 X0) (k8_filter_1 \\ & \quad X1)))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v10_lattices X1) \wedge (l3_lattices \\ & X1))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge ((v10_lattices X2) \wedge (l3_lattices \\ & X2))) \Rightarrow (((r1_filter_1 X0 X1) \wedge (r1_filter_1 X1 X2)) \Rightarrow (r1_filter_1 \\ & \quad X0 X2)))) \end{aligned}$$