

t36_uniroots

(TMULcbHtF9iBvAk11wtmtaHLxF8ZcLqpsV7)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_uniroots : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_uniroots : \iota \Rightarrow \iota$ be given. Let $k1_complfld : \iota$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\ (k2_uniroots X0 = ReplSep (toset (\lambda X1 : \iota. m1_subset_1 X1 (u1_struct_0 \\ (k1_uniroots k1_complfld)))) (\lambda X1 : \iota. r1_nat_d (k6_group_1 \\ (k1_uniroots k1_complfld) X1) X0) (\lambda X1 : \iota. X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\ (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k1_uniroots k1_complfld))) \Rightarrow \\ ((r1_nat_d (k6_group_1 (k1_uniroots k1_complfld) X1) X0) \Leftrightarrow (X1 \in \\ k2_uniroots X0))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\ (\forall X1. (X1 \in k2_uniroots X0) \Leftrightarrow (\exists X2. (m1_subset_1 X2 \\ (u1_struct_0 (k1_uniroots k1_complfld))) \wedge ((X1 = X2) \wedge (r1_nat_d \\ (k6_group_1 (k1_uniroots k1_complfld) X2) X0)))) \end{aligned}$$