

l15_topgen_3

(TMVmbQyYGLfakHCa6Lsrw8tf9Nrjetju9W6)

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Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_topgen_3 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k1_cantor_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_rat_1 : \iota \Rightarrow o$ be given. Assume the following.

$$(\neg v2_struct_0\ k2_topgen_3) \wedge ((v1_pre_topc\ k2_topgen_3) \wedge ((v2_pre_topc\ k2_topgen_3) \wedge (l1_pre_topc\ k2_topgen_3))) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0\ X0) \wedge ((v1_pre_topc\ X0) \wedge ((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)))) \Rightarrow ((X0 = k2_topgen_3) \Leftrightarrow ((u1_struct_0\ X0 = \\ &k1_numbers) \wedge (\exists X1. (m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ k1_numbers)))) \wedge ((u1_pre_topc\ X0 = k1_cantor_1\ k1_numbers\ X1) \wedge \\ &(X1 = ReplSep2\ (toset\ (\lambda X2 : \iota. m1_subset_1\ X2\ k1_numbers)) \\ &(\lambda X2 : \iota. toset\ (\lambda X3 : \iota. m1_subset_1\ X3\ k1_numbers))\ (\\ &\lambda X2 : \iota. \lambda X3 : \iota. (\neg r1_xxreal_0\ X3\ X2) \wedge (v1_rat_1\ X3))\ (\\ &\lambda X2 : \iota. \lambda X3 : \iota. k3_rcomp_1\ X2\ X3)))))) \quad (2) \end{aligned}$$

Theorem 1 $u1_struct_0\ k2_topgen_3 = k1_numbers.$