

t51_chain_1 (TM-
dovo5Hvw838XxGYnWS8La9K7ouGa7Y6Sy)

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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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_chain_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k4_chain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k10_chain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_abian : \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_chain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\ & (\forall X1. (m1_chain_1 X1 X0) \Rightarrow (\forall X2. (m2_subset_1 X2 k1_numbers \\ & k5_numbers) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (k4_chain_1 \\ X0 X1 (k2_nat_1 X2 np_1)))) \Rightarrow (k10_chain_1 X0 X1 X2 X3 = ReplSep (toset \\ & (\lambda X4 : \iota. m2_subset_1 X4 (k1_zfmisc_1 (k1_euclid X0)) (k4_chain_1 \\ X0 X1 X2)))) (\lambda X4 : \iota. (r1_xxreal_0 (k2_nat_1 X2 np_1) X0) \wedge \\ & \neg v1_abian (k5_card_1 (k9_subset_1 (k4_chain_1 X0 X1 (k2_nat_1 \\ X2 np_1)) (k9_chain_1 X0 X1 X2 X4) X3)))) (\lambda X4 : \iota. X4)))))) \end{aligned} \quad (1)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge (m2_subset_1 X1 k1_numbers k5_numbers)) \Rightarrow \\ & (\forall X2. (m1_chain_1 X2 X1) \Rightarrow (\forall X3. (m2_subset_1 X3 (k1_zfmisc_1 \\ & (k1_euclid X1)) (k4_chain_1 X1 X2 X0)) \Rightarrow (\forall X4. (m1_subset_1 \\ X4 (k1_zfmisc_1 (k4_chain_1 X1 X2 (k2_nat_1 X0 np_1)))) \Rightarrow ((X3 \in \\ & k10_chain_1 X1 X2 X0 X4) \Leftrightarrow ((r1_xxreal_0 (k2_nat_1 X0 np_1) X1) \wedge \\ & (\neg v1_abian (k5_card_1 (k9_subset_1 (k4_chain_1 X1 X2 (k2_nat_1 \\ X0 np_1)) (k9_chain_1 X1 X2 X0 X3) X4)))))))))) \end{aligned}$$