

t27_combgras (TMZgGCi-
coqC1mWXWsdeZdGei1Ng5DQjgqE5)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $k1_combgras : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_combgras : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k5_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(\neg v1_xboole_0 \\ & X1) \Rightarrow ((r1_ordinal1 (k2_nat_1 X0 np_1) (k1_card_1 X1)) \Rightarrow ((r1_xxreal_0 \\ & X0 k6_numbers) \vee (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_incsp_1 \\ & (k1_combgras X0 X1)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & X1)) \Rightarrow (((k1_card_1 X3 = k5_real_1 X0 np_1) \wedge (X2 = ReplSep (toset \\ & (\lambda X4 : \iota.m1_subset_1 X4 (k1_zfmisc_1 X1))) (\lambda X4 : \iota.(\\ & k1_card_1 X4 = X0) \wedge (r1_tarski X3 X4)) (\lambda X4 : \iota.X4))) \Rightarrow (X3 = k1_setfam_1 \\ & X2))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(\neg v1_xboole_0 \\ & X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_incsp_1 (k1_combgras \\ & X0 X1)))) \Rightarrow ((v3_combgras X2 X0 X1) \Leftrightarrow (\exists X3.(m1_subset_1 X3 \\ & (k1_zfmisc_1 X1)) \wedge ((k1_card_1 X3 = k5_real_1 X0 np_1) \wedge (X2 = ReplSep \\ & (toset (\lambda X4 : \iota.m1_subset_1 X4 (k1_zfmisc_1 X1))) (\lambda X4 : \\ & \iota.(k1_card_1 X4 = X0) \wedge (r1_tarski X3 X4)) (\lambda X4 : \iota.X4))))))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(\neg v1_xboole_0 \\ & X1) \Rightarrow ((r1_ordinal1 (k2_nat_1 X0 np_1) (k1_card_1 X1)) \Rightarrow ((r1_xxreal_0 \\ & X0 k6_numbers) \vee (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_incsp_1 \\ & (k1_combgras X0 X1)))) \Rightarrow ((v3_combgras X2 X0 X1) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (k1_zfmisc_1 X1)) \Rightarrow ((X3 = k1_setfam_1 X2) \Rightarrow ((k1_card_1 X3 = k5_real_1 \\ & X0 np_1) \wedge (X2 = ReplSep (toset (\lambda X4 : \iota.m1_subset_1 X4 (k1_zfmisc_1 \\ & X1))) (\lambda X4 : \iota.(k1_card_1 X4 = X0) \wedge (r1_tarski X3 X4)) (\lambda X4 : \\ & \iota.X4)))))))))) \end{aligned}$$