

thm_2Epred__set_2EIN__UNIV
(TMJCBgqqqsR9bTfjxBDEMSTEF14kUX7PRaiW)

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Definition 1 We define $c_2Emin_2E_3D$ to be $\lambda A.\lambda x \in A.\lambda y \in A.inj_o (x = y)$ of type $\iota \Rightarrow \iota$.

Definition 2 We define c_2Ebool_2EIN to be $\lambda A_27a : \iota.(\lambda V0x \in A_27a.(\lambda V1f \in (2^{A_27a}).(\lambda V1x \in A_27a.V1f V0x)))$

Definition 3 We define c_2Ebool_2EET to be $(\lambda A.\lambda V0x \in A.(\lambda V1x \in A.(\lambda V1f \in (2^{A_27a}).(\lambda V1x \in A_27a.V1f V0x))))$

Definition 4 We define $c_2Ebool_2E_21$ to be $\lambda A_27a : \iota.(\lambda V0P \in (2^{A_27a}).(\lambda V1x \in A_27a.(\lambda V1f \in (2^{A_27a}).(\lambda V1x \in A_27a.V1f V0P))))$

Definition 5 We define $c_2Epred_set_2EUNIV$ to be $\lambda A_27a : \iota.(\lambda V0x \in A_27a.c_2Ebool_2EET)$.

Assume the following.

$$True \tag{1}$$

Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow (\forall V0P \in (2^{A_27a}).(\forall V1x \in A_27a.((p (ap (ap (c_2Ebool_2EIN A_27a) V1x) V0P)) \Leftrightarrow (p (ap V0P V1x)))))) \tag{2}$$

Theorem 1

$$\forall A_27a.nonempty A_27a \Rightarrow (\forall V0x \in A_27a.(p (ap (ap (c_2Ebool_2EIN A_27a) V0x) (c_2Epred_set_2EUNIV A_27a))))$$