

thm_2EASCIInumbers_2En2s__compute (TMYC- qLfTkPiY2mQnpqQMSu7j4o5G6GC4yDe)

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Let $ty_2Enum_2Enum : \iota$ be given. Assume the following.

$$nonempty\ ty_2Enum_2Enum \tag{1}$$

Let $ty_2Elist_2Elist : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A0.nonempty\ A0 \Rightarrow nonempty\ (ty_2Elist_2Elist\ A0) \tag{2}$$

Let $c_2Enumposrep_2En2l : \iota$ be given. Assume the following.

$$c_2Enumposrep_2En2l \in (((ty_2Elist_2Elist\ ty_2Enum_2Enum)^{ty_2Enum_2Enum})^{ty_2Enum_2Enum}) \tag{3}$$

Let $c_2Elist_2EMAP : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty\ A_27a \Rightarrow \forall A_27b.nonempty\ A_27b \Rightarrow c_2Elist_2EMAP\ A_27a\ A_27b \in (((ty_2Elist_2Elist\ A_27b)^{(ty_2Elist_2Elist\ A_27a)})^{(A_27b^{A_27a})}) \tag{4}$$

Let $ty_2Estring_2Echar : \iota$ be given. Assume the following.

$$nonempty\ ty_2Estring_2Echar \tag{5}$$

Let $c_2Elist_2EREVERSE : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty\ A_27a \Rightarrow c_2Elist_2EREVERSE\ A_27a \in ((ty_2Elist_2Elist\ A_27a)^{(ty_2Elist_2Elist\ A_27a)}) \tag{6}$$

Definition 1 We define c_2Emin_2E3D 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_2ET to be $(ap\ (ap\ (c_2Emin_2E3D\ (2^2))\ (\lambda V0x \in 2.V0x))\ (\lambda V1x \in 2.V1x))$

Definition 3 We define c_2Ebool_2E21 to be $\lambda A_27a : \iota.(\lambda V0P \in (2^{A_27a}).(ap\ (ap\ (c_2Emin_2E3D\ (2^{A_27a}))\ (\lambda V1x \in 2.V1x))\ (\lambda V1x \in 2.V1x)))$

Definition 4 We define $c_2EASCIInumbers_2En2s$ to be $\lambda V0b \in ty_2Enum_2Enum.\lambda V1f \in (ty_2Estring_2Echar)$

Definition 5 We define c_2Ebool_2EF to be $(ap (c_2Ebool_2E_21\ 2) (\lambda V0t \in 2.V0t))$.

Definition 6 We define $c_2Emin_2E_3D_3D_3E$ to be $\lambda P \in 2.\lambda Q \in 2.inj_o (p P \Rightarrow p Q)$ of type ι .

Definition 7 We define $c_2Ebool_2E_7E$ to be $(\lambda V0t \in 2.(ap (ap c_2Emin_2E_3D_3D_3E V0t) c_2Ebool_2EF))$.

Let $c_2Estring_2EIMPL0DE : \iota$ be given. Assume the following.

$$c_2Estring_2EIMPL0DE \in ((ty_2Elist_2Elist\ ty_2Estring_2Echar)^{(ty_2Elist_2Elist\ ty_2Estring_2Echar)}) \quad (7)$$

Let $c_2Estring_2EEXPLODE : \iota$ be given. Assume the following.

$$c_2Estring_2EEXPLODE \in ((ty_2Elist_2Elist\ ty_2Estring_2Echar)^{(ty_2Elist_2Elist\ ty_2Estring_2Echar)}) \quad (8)$$

Definition 8 We define $c_2Ebool_2E_2F_5C$ to be $(\lambda V0t1 \in 2.(\lambda V1t2 \in 2.(ap (c_2Ebool_2E_21\ 2) (\lambda V2t \in 2.V2t))))$.

Assume the following.

$$True \quad (9)$$

Assume the following.

$$(\forall V0t \in 2.(((True \Leftrightarrow (p\ V0t)) \Leftrightarrow (p\ V0t)) \wedge (((p\ V0t) \Leftrightarrow True) \Leftrightarrow (p\ V0t)) \wedge (((False \Leftrightarrow (p\ V0t)) \Leftrightarrow \neg(p\ V0t)) \wedge (((p\ V0t) \Leftrightarrow False) \Leftrightarrow \neg(p\ V0t)))))) \quad (10)$$

Assume the following.

$$\forall A_27a.nonempty\ A_27a \Rightarrow (\forall V0l1 \in (ty_2Elist_2Elist\ A_27a).(\forall V1l2 \in (ty_2Elist_2Elist\ A_27a).(((ap (c_2Elist_2EREVERSE\ A_27a)\ V0l1) = (ap (c_2Elist_2EREVERSE\ A_27a)\ V1l2)) \Leftrightarrow (V0l1 = V1l2)))) \quad (11)$$

Assume the following.

$$(\forall V0s \in (ty_2Elist_2Elist\ ty_2Estring_2Echar).(((ap c_2Estring_2EEXPLODE\ V0s) = V0s) \wedge ((ap c_2Estring_2EIMPL0DE\ V0s) = V0s))) \quad (12)$$

Theorem 1

$$(\forall V0b \in ty_2Enum_2Enum.(\forall V1f \in (ty_2Estring_2Echar)^{ty_2Enum_2Enum}).(\forall V2n \in ty_2Enum_2Enum.(((ap (ap (ap c_2EASCIInumbers_2En2s\ V0b)\ V1f)\ V2n) = (ap c_2Estring_2EIMPL0DE (ap (c_2Elist_2EREVERSE\ ty_2Estring_2Echar) (ap (ap (c_2Elist_2EMAP\ ty_2Enum_2Enum\ ty_2Estring_2Echar)\ V1f) (ap (ap c_2Enumposrep_2En2l\ V0b)\ V2n))))))))))$$