

thm_2EringNorm_2Evarlist__insert__def
(TMYEgbf6mKjWSC6xx5WaFEouCb5cVNBAzNC)

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Let $ty_2Ecanonical_2Ecanonical_sum : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A0.nonempty\ A0 \Rightarrow nonempty\ (ty_2Ecanonical_2Ecanonical_sum\ A0) \quad (1)$$

Let $c_2Ecanonical_2ENil_monom : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty\ A_27a \Rightarrow c_2Ecanonical_2ENil_monom\ A_27a \in (ty_2Ecanonical_2Ecanonical_sum\ A_27a) \quad (2)$$

Let $ty_2Equote_2Eindex : \iota$ be given. Assume the following.

$$nonempty\ ty_2Equote_2Eindex \quad (3)$$

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

$$\forall A0.nonempty\ A0 \Rightarrow nonempty\ (ty_2Elist_2Elist\ A0) \quad (4)$$

Let $c_2Ecanonical_2Econs_varlist : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty\ A_27a \Rightarrow c_2Ecanonical_2Econs_varlist\ A_27a \in (((ty_2Ecanonical_2Ecanonical_sum\ A_27a)^{(ty_2Ecanonical_2Ecanonical_sum\ A_27a)})^{(ty_2Elist_2Elist\ A_27a)}) \quad (5)$$

Let $ty_2EternaryComparisons_2Eordering : \iota$ be given. Assume the following.

$$nonempty\ ty_2EternaryComparisons_2Eordering \quad (6)$$

Let $c_2Equote_2Eindex_compare : \iota$ be given. Assume the following.

$$c_2Equote_2Eindex_compare \in ((ty_2EternaryComparisons_2Eordering^{ty_2Equote_2Eindex})^{ty_2Equote_2Eindex}) \quad (7)$$

Let $c_2EternaryComparisons_2Elist_compare : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty\ A_27a \Rightarrow \forall A_27b.nonempty\ A_27b \Rightarrow c_2EternaryComparisons_2Elist_compare\ A_27a\ A_27b \in (((ty_2EternaryComparisons_2Eordering^{(ty_2Elist_2Elist\ A_27b)})^{(ty_2Elist_2Elist\ A_27a)})^{(ty_2Elist_2Elist\ A_27a)}) \quad (8)$$

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

$$nonempty\ ty_2Enum_2Enum \quad (9)$$

Let $c_2EternaryComparisons_2Eordering2num : \iota$ be given. Assume the following.

$$c_2EternaryComparisons_2Eordering2num \in (ty_2Enum_2Enum^{ty_2EternaryComparisons_2Eordering}) \quad (10)$$

Let $c_2Enum_2EZERO_REP : \iota$ be given. Assume the following.

$$c_2Enum_2EZERO_REP \in \omega \quad (11)$$

Let $c_2Enum_2EABS_num : \iota$ be given. Assume the following.

$$c_2Enum_2EABS_num \in (ty_2Enum_2Enum^{\omega}) \quad (12)$$

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_2Enum_2E0 to be $(ap\ c_2Enum_2EABS_num\ c_2Enum_2EZERO_REP)$.

Definition 3 We define $c_2Earithmetic_2EZERO$ to be c_2Enum_2E0 .

Let $c_2Enum_2EREP_num : \iota$ be given. Assume the following.

$$c_2Enum_2EREP_num \in (\omega^{ty_2Enum_2Enum}) \quad (13)$$

Let $c_2Enum_2ESUC_REP : \iota$ be given. Assume the following.

$$c_2Enum_2ESUC_REP \in (\omega^{\omega}) \quad (14)$$

Definition 4 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 5 We define c_2Ebool_2E21 to be $\lambda A. 27a : \iota. (\lambda V0P \in (2^{A-27a}). (ap\ (ap\ (c_2Emin_2E3D\ (2^{A-27a}))\ (\lambda V1P \in 2.V1P))\ (\lambda V2P \in 2.V2P))$

Definition 6 We define c_2Enum_2ESUC to be $\lambda V0m \in ty_2Enum_2Enum. (ap\ c_2Enum_2EABS_num\ (ap\ c_2Enum_2EREP_num\ (ap\ c_2Enum_2ESUC_REP\ m)))$

Let $c_2Earithmetic_2E_2B : \iota$ be given. Assume the following.

$$c_2Earithmetic_2E_2B \in ((ty_2Enum_2Enum^{ty_2Enum_2Enum})^{ty_2Enum_2Enum}) \quad (15)$$

Definition 7 We define $c_2Earithmetic_2EBIT1$ to be $\lambda V0n \in ty_2Enum_2Enum. (ap\ (ap\ c_2Earithmetic_2E_2B\ n))$

Definition 8 We define $c_2Earithmetic_2ENUMERAL$ to be $\lambda V0x \in ty_2Enum_2Enum. V0x$.

Definition 9 We define c_2Ebool_2EF to be $(ap\ (c_2Ebool_2E21\ 2)\ (\lambda V0t \in 2.V0t))$.

Definition 10 We define $c_2Emin_2E3D_3D_3E$ to be $\lambda P \in 2. \lambda Q \in 2. inj_o (p \Rightarrow q)$ of type ι .

Definition 11 We define `c_2Ebool_2E_2F_5C` to be $(\lambda V0t1 \in 2.(\lambda V1t2 \in 2.(ap (c_2Ebool_2E_21 2) (\lambda V2t \in$

Definition 12 We define `c_2Emin_2E_40` to be $\lambda A.\lambda P \in 2^A.\mathbf{if} (\exists x \in A.p (ap P x)) \mathbf{then} (the (\lambda x.x \in A)\lambda y$
of type $\iota \Rightarrow \iota$.

Definition 13 We define `c_2Ebool_2ECOND` to be $\lambda A_27a : \iota.(\lambda V0t \in 2.(\lambda V1t1 \in A_27a.(\lambda V2t2 \in A_27a.($

Definition 14 We define `c_2Ebool_2E_7E` to be $(\lambda V0t \in 2.(ap (ap c_2Emin_2E_3D_3D_3E V0t) c_2Ebool_2E_7E$

Definition 15 We define `c_2Ebool_2E_3F` to be $\lambda A_27a : \iota.(\lambda V0P \in (2^{A_27a}).(ap V0P (ap (c_2Emin_2E_40$

Definition 16 We define `c_2Eprim_rec_2E_3C` to be $\lambda V0m \in ty_2Enum_2Enum.\lambda V1n \in ty_2Enum_2Enum$

Definition 17 We define `c_2EternaryComparisons_2Eordering_CASE` to be $\lambda A_27a : \iota.\lambda V0x \in ty_2Eternary$

Let `c_2Ecanonical_2ECons_monom` : $\iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Ecanonical_2ECons_monom A_27a \in (((ty_2Ecanonical_2Ecanonical_sum A_27a)^{(ty_2Ecanonical_2Ecanonical_sum A_27a)}(ty_2Elist_2Elist ty_2Eq$$
 (16)

Let `ty_2Ering_2Ering` : $\iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A0.nonempty A0 \Rightarrow nonempty (ty_2Ering_2Ering A0) \quad (17)$$

Let `c_2Ering_2Ering_RM` : $\iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Ering_2Ering_RM A_27a \in (((A_27a^{A_27a})^{A_27a})^{(ty_2Ering_2Ering A_27a)}) \quad (18)$$

Let `c_2Ering_2Ering_RP` : $\iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Ering_2Ering_RP A_27a \in (((A_27a^{A_27a})^{A_27a})^{(ty_2Ering_2Ering A_27a)}) \quad (19)$$

Let `c_2Ering_2Ering_R1` : $\iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Ering_2Ering_R1 A_27a \in (A_27a^{(ty_2Ering_2Ering A_27a)}) \quad (20)$$

Let `c_2Ering_2Ering_R0` : $\iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Ering_2Ering_R0 A_27a \in (A_27a^{(ty_2Ering_2Ering A_27a)}) \quad (21)$$

Let `ty_2Esemi_ring_2Esemi_ring` : $\iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A0.nonempty A0 \Rightarrow nonempty (ty_2Esemi_ring_2Esemi_ring A0) \quad (22)$$

Let `c_2Esemi_ring_2Erecordtype_2Esemi_ring` : $\iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Esemi_ring_2Erecordtype_2Esemi_ring A_27a \in (((((ty_2Esemi_ring_2Esemi_ring A_27a)^{(A_27a^{A_27a})^{A_27a}})^{(A_27a^{A_27a})^{A_27a}})^{A_27a})^{A_27a}) \quad (23)$$

Definition 18 We define $c_2Ering_2Esemi_ring_of$ to be $\lambda A_27a : \iota.\lambda V0r \in (ty_2Ering_2Ering A_27a).(a$

Let $c_2Ecanonical_2Evarlist_insert : \iota \Rightarrow \iota$ be given. Assume the following.

$$A_27a \in (((ty_2Ecanonical_2Ecanonical_sum A_27a)^{(ty_2Ecanonical_2Ecanonical_sum A_27a)})^{(ty_2Elist_2E}} \quad (24)$$

Definition 19 We define $c_2EringNorm_2Er_varlist_insert$ to be $\lambda A_27a : \iota.\lambda V0r \in (ty_2Ering_2Ering A_27a)$

Let $c_2Esemi_ring_2Esemi_ring_SRM : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Esemi_ring_2Esemi_ring_SRM \quad (25)$$

$$A_27a \in (((A_27a^{A_27a})^{A_27a})^{(ty_2Esemi_ring_2Esemi_ring A_27a)})$$

Let $c_2Esemi_ring_2Esemi_ring_SRP : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Esemi_ring_2Esemi_ring_SRP \quad (26)$$

$$A_27a \in (((A_27a^{A_27a})^{A_27a})^{(ty_2Esemi_ring_2Esemi_ring A_27a)})$$

Let $c_2Esemi_ring_2Esemi_ring_SR1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Esemi_ring_2Esemi_ring_SR1 \quad (27)$$

$$A_27a \in (A_27a^{(ty_2Esemi_ring_2Esemi_ring A_27a)})$$

Let $c_2Esemi_ring_2Esemi_ring_SR0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_2Esemi_ring_2Esemi_ring_SR0 \quad (28)$$

$$A_27a \in (A_27a^{(ty_2Esemi_ring_2Esemi_ring A_27a)})$$

Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow (\forall V0x \in A_27a.(\forall V1y \in \quad (29)$$

$$A_27a.((V0x = V1y) \Leftrightarrow (V1y = V0x))))$$

Assume the following.

$$\begin{aligned}
& \forall A.27a.nonempty A.27a \Rightarrow ((\forall V0t2 \in (ty_2Ecanonical_2Ecanonical_sum \\
& \quad A.27a).(\forall V1sr \in (ty_2Esemi_ring_2Esemi_ring A.27a). \\
& \quad (\forall V2l2 \in (ty_2Elist_2Elist ty_2Equote_2Eindex).(\forall V3l1 \in \\
& \quad (ty_2Elist_2Elist ty_2Equote_2Eindex).(\forall V4c2 \in A.27a. \\
& \quad ((ap (ap (ap (c_2Ecanonical_2Evarlist_insert A.27a) V1sr) V3l1) \\
& \quad (ap (ap (ap (c_2Ecanonical_2Econs_monom A.27a) V4c2) V2l2) V0t2))) = \\
& (ap (ap (ap (ap (c_2EternaryComparisons_2Eordering_CASE (ty_2Ecanonical_2Ecanonical_sum \\
& \quad A.27a)) (ap (ap (ap (c_2EternaryComparisons_2Elist_compare \\
& \quad ty_2Equote_2Eindex ty_2Equote_2Eindex) c_2Equote_2Eindex_compare) \\
& \quad V3l1) V2l2)) (ap (ap (c_2Ecanonical_2Econs_varlist A.27a) V3l1) \\
& \quad (ap (ap (ap (c_2Ecanonical_2Econs_monom A.27a) V4c2) V2l2) V0t2)))) \\
& (ap (ap (ap (c_2Ecanonical_2Econs_monom A.27a) (ap (ap (ap (c_2Esemi_ring_2Esemi_ring_SRP \\
& \quad A.27a) V1sr) (ap (c_2Esemi_ring_2Esemi_ring_SR1 A.27a) V1sr)) \\
& \quad V4c2)) V3l1) V0t2)) (ap (ap (ap (c_2Ecanonical_2Econs_monom A.27a) \\
& \quad V4c2) V2l2) (ap (ap (ap (c_2Ecanonical_2Evarlist_insert A.27a) \\
& \quad V1sr) V3l1) V0t2)))))) \wedge ((\forall V5t2 \in (ty_2Ecanonical_2Ecanonical_sum \\
& \quad A.27a).(\forall V6sr \in (ty_2Esemi_ring_2Esemi_ring A.27a). \\
& \quad (\forall V7l2 \in (ty_2Elist_2Elist ty_2Equote_2Eindex).(\forall V8l1 \in \\
& \quad (ty_2Elist_2Elist ty_2Equote_2Eindex).((ap (ap (ap (c_2Ecanonical_2Evarlist_insert \\
& \quad A.27a) V6sr) V8l1) (ap (ap (c_2Ecanonical_2Econs_varlist A.27a) \\
& \quad V7l2) V5t2)) = (ap (ap (ap (ap (c_2EternaryComparisons_2Eordering_CASE \\
& \quad (ty_2Ecanonical_2Ecanonical_sum A.27a)) (ap (ap (ap (c_2EternaryComparisons_2Elist_compare \\
& \quad ty_2Equote_2Eindex ty_2Equote_2Eindex) c_2Equote_2Eindex_compare) \\
& \quad V8l1) V7l2)) (ap (ap (c_2Ecanonical_2Econs_varlist A.27a) V8l1) \\
& \quad (ap (ap (c_2Ecanonical_2Econs_varlist A.27a) V7l2) V5t2)))) (\\
& ap (ap (ap (c_2Ecanonical_2Econs_monom A.27a) (ap (ap (ap (c_2Esemi_ring_2Esemi_ring_SRP \\
& \quad A.27a) V6sr) (ap (c_2Esemi_ring_2Esemi_ring_SR1 A.27a) V6sr)) \\
& \quad (ap (c_2Esemi_ring_2Esemi_ring_SR1 A.27a) V6sr))) V8l1) V5t2)) \\
& \quad (ap (ap (c_2Ecanonical_2Econs_varlist A.27a) V7l2) (ap (ap (ap \\
& \quad (c_2Ecanonical_2Evarlist_insert A.27a) V6sr) V8l1) V5t2)))))) \wedge \\
& \quad (\forall V9sr \in (ty_2Esemi_ring_2Esemi_ring A.27a).(\forall V10l1 \in \\
& \quad (ty_2Elist_2Elist ty_2Equote_2Eindex).((ap (ap (ap (c_2Ecanonical_2Evarlist_insert \\
& \quad A.27a) V9sr) V10l1) (c_2Ecanonical_2ENil_monom A.27a)) = (ap \\
& \quad (ap (c_2Ecanonical_2Econs_varlist A.27a) V10l1) (c_2Ecanonical_2ENil_monom \\
& \quad A.27a))))))
\end{aligned}$$

(30)

Assume the following.

$$\begin{aligned}
& \forall A_27a.nonempty\ A_27a \Rightarrow ((\forall V0a \in A_27a. (\forall V1a0 \in \\
& A_27a. (\forall V2f \in ((A_27a^{A_27a})^{A_27a}). (\forall V3f0 \in ((A_27a^{A_27a})^{A_27a}). \\
& ((ap\ (c_2Esemi_ring_2Esemi_ring_SR0\ A_27a)\ (ap\ (ap\ (ap\ (ap \\
& (c_2Esemi_ring_2Erecordtype_2Esemi_ring\ A_27a)\ V0a)\ V1a0) \\
& V2f)\ V3f0)) = V0a)))) \wedge ((\forall V4a \in A_27a. (\forall V5a0 \in A_27a. \\
& (\forall V6f \in ((A_27a^{A_27a})^{A_27a}). (\forall V7f0 \in ((A_27a^{A_27a})^{A_27a}). \\
& ((ap\ (c_2Esemi_ring_2Esemi_ring_SR1\ A_27a)\ (ap\ (ap\ (ap\ (ap \\
& (c_2Esemi_ring_2Erecordtype_2Esemi_ring\ A_27a)\ V4a)\ V5a0) \\
& V6f)\ V7f0)) = V5a0)))) \wedge ((\forall V8a \in A_27a. (\forall V9a0 \in A_27a. \\
& (\forall V10f \in ((A_27a^{A_27a})^{A_27a}). (\forall V11f0 \in ((A_27a^{A_27a})^{A_27a}). \\
& ((ap\ (c_2Esemi_ring_2Esemi_ring_SRP\ A_27a)\ (ap\ (ap\ (ap\ (ap \\
& (c_2Esemi_ring_2Erecordtype_2Esemi_ring\ A_27a)\ V8a)\ V9a0) \\
& V10f)\ V11f0)) = V10f)))) \wedge (\forall V12a \in A_27a. (\forall V13a0 \in \\
& A_27a. (\forall V14f \in ((A_27a^{A_27a})^{A_27a}). (\forall V15f0 \in ((\\
& A_27a^{A_27a})^{A_27a}). ((ap\ (c_2Esemi_ring_2Esemi_ring_SRM \\
& A_27a)\ (ap\ (ap\ (ap\ (ap\ (c_2Esemi_ring_2Erecordtype_2Esemi_ring \\
& A_27a)\ V12a)\ V13a0)\ V14f)\ V15f0)) = V15f0)))))))))
\end{aligned} \tag{31}$$

Theorem 1

$$\begin{aligned}
& \forall A_27a. \text{nonempty } A_27a \Rightarrow (\forall V0r \in (\text{ty_2Ering_2Ering } \\
& A_27a). (\forall V1t2 \in (\text{ty_2Ecanonical_2Ecanonical_sum } A_27a). \\
& (\forall V2l2 \in (\text{ty_2Elist_2Elist } \text{ty_2Equote_2Eindex}). (\forall V3l1 \in \\
& (\text{ty_2Elist_2Elist } \text{ty_2Equote_2Eindex}). (\forall V4c2 \in A_27a. \\
& ((\text{ap } (\text{ap } (\text{ap } (\text{c_2EringNorm_2Er_varlist_insert } A_27a) V0r) V3l1) \\
& (\text{ap } (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_monom } A_27a) V4c2) V2l2) V1t2))) = \\
& (\text{ap } (\text{ap } (\text{ap } (\text{ap } (\text{c_2EternaryComparisons_2Eordering_CASE } (\text{ty_2Ecanonical_2Ecanonical_sum } \\
& A_27a)) (\text{ap } (\text{ap } (\text{ap } (\text{c_2EternaryComparisons_2Elist_compare } \\
& \text{ty_2Equote_2Eindex } \text{ty_2Equote_2Eindex}) \text{c_2Equote_2Eindex_compare}) \\
& V3l1) V2l2)) (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_varlist } A_27a) V3l1) \\
& (\text{ap } (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_monom } A_27a) V4c2) V2l2) V1t2))) \\
& (\text{ap } (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_monom } A_27a) (\text{ap } (\text{ap } (\text{ap } (\text{c_2Ering_2Ering_RP } \\
& A_27a) V0r) (\text{ap } (\text{c_2Ering_2Ering_R1 } A_27a) V0r)) V4c2)) V3l1) \\
& V1t2)) (\text{ap } (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_monom } A_27a) V4c2) V2l2) \\
& (\text{ap } (\text{ap } (\text{ap } (\text{c_2EringNorm_2Er_varlist_insert } A_27a) V0r) V3l1) \\
& V1t2)))))) \wedge ((\forall V5t2 \in (\text{ty_2Ecanonical_2Ecanonical_sum } \\
& A_27a). (\forall V6l2 \in (\text{ty_2Elist_2Elist } \text{ty_2Equote_2Eindex}). \\
& (\forall V7l1 \in (\text{ty_2Elist_2Elist } \text{ty_2Equote_2Eindex}). ((\text{ap } (\\
& \text{ap } (\text{ap } (\text{c_2EringNorm_2Er_varlist_insert } A_27a) V0r) V7l1) (\\
& \text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_varlist } A_27a) V6l2) V5t2))) = (\text{ap } \\
& (\text{ap } (\text{ap } (\text{c_2EternaryComparisons_2Eordering_CASE } (\text{ty_2Ecanonical_2Ecanonical_sum } \\
& A_27a)) (\text{ap } (\text{ap } (\text{ap } (\text{c_2EternaryComparisons_2Elist_compare } \\
& \text{ty_2Equote_2Eindex } \text{ty_2Equote_2Eindex}) \text{c_2Equote_2Eindex_compare}) \\
& V7l1) V6l2)) (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_varlist } A_27a) V7l1) \\
& (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_varlist } A_27a) V6l2) V5t2)))) (\\
& \text{ap } (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_monom } A_27a) (\text{ap } (\text{ap } (\text{ap } (\text{c_2Ering_2Ering_RP } \\
& A_27a) V0r) (\text{ap } (\text{c_2Ering_2Ering_R1 } A_27a) V0r)) (\text{ap } (\text{c_2Ering_2Ering_R1 } \\
& A_27a) V0r))) V7l1) V5t2)) (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_varlist } \\
& A_27a) V6l2) (\text{ap } (\text{ap } (\text{ap } (\text{c_2EringNorm_2Er_varlist_insert } A_27a) \\
& V0r) V7l1) V5t2)))))) \wedge ((\forall V8l1 \in (\text{ty_2Elist_2Elist } \text{ty_2Equote_2Eindex}). \\
& ((\text{ap } (\text{ap } (\text{ap } (\text{c_2EringNorm_2Er_varlist_insert } A_27a) V0r) V8l1) \\
& (\text{c_2Ecanonical_2ENil_monom } A_27a)) = (\text{ap } (\text{ap } (\text{c_2Ecanonical_2Econs_varlist } \\
& A_27a) V8l1) (\text{c_2Ecanonical_2ENil_monom } A_27a))))))
\end{aligned}$$