

thm_2Erat_2ERAT__SGN__0 (TMRJN- GrHKjbj7z7FMaQVAG6gNx9rFU51Gxr)

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

Definition 3 We define $c_2Ebool_2E_2T$ to be $(ap (ap (c_2Emin_2E_3D (2^2)) (\lambda V0x \in 2.V0x)) (\lambda V1x \in 2.V1x))$

Definition 4 We define $c_2Ebool_2E_21$ to be $\lambda A_27a : \iota.(\lambda V0P \in (2^{A_27a}).(ap (ap (c_2Emin_2E_3D (2^{A_27a}))$

Definition 5 We define $c_2Ebool_2E_2F_5C$ to be $(\lambda V0t1 \in 2.(\lambda V1t2 \in 2.(ap (c_2Ebool_2E_21 2) (\lambda V2t \in 2.V2t)))$

Let $ty_2Epair_2Eprod : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A0.nonempty A0 \Rightarrow \forall A1.nonempty A1 \Rightarrow nonempty (ty_2Epair_2Eprod A0 A1) \tag{1}$$

Let $c_2Epair_2EABS_prod : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow \forall A_27b.nonempty A_27b \Rightarrow c_2Epair_2EABS_prod A_27a A_27b \in ((ty_2Epair_2Eprod A_27a A_27b)^{(2^{A_27b})^{A_27a}}) \tag{2}$$

Definition 6 We define $c_2Epair_2E_2C$ to be $\lambda A_27a : \iota.\lambda A_27b : \iota.\lambda V0x \in A_27a.\lambda V1y \in A_27b.(ap (c_2E$

Let $ty_2Efrac_2Efrac : \iota$ be given. Assume the following.

$$nonempty ty_2Efrac_2Efrac \tag{3}$$

Let $ty_2Einteger_2Eint : \iota$ be given. Assume the following.

$$nonempty ty_2Einteger_2Eint \tag{4}$$

Let $c_2Efrac_2Eabs_frac : \iota$ be given. Assume the following.

$$c_2Efrac_2Eabs_frac \in (ty_2Efrac_2Efrac^{(ty_2Epair_2Eprod ty_2Einteger_2Eint ty_2Einteger_2Eint)}) \tag{5}$$

Let $c_2Efrac_2Erep_frac : \iota$ be given. Assume the following.

$$c_2Efrac_2Erep_frac \in ((ty_2Epair_2Eprod\ ty_2Einteger_2Eint\ ty_2Einteger_2Eint)^{ty_2Efrac_2Efrac}) \quad (6)$$

Let $c_2Epair_2EFST : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty\ A_27a \Rightarrow \forall A_27b.nonempty\ A_27b \Rightarrow c_2Epair_2EFST\ A_27a\ A_27b \in (A_27a^{(ty_2Epair_2Eprod\ A_27a\ A_27b)}) \quad (7)$$

Definition 7 We define $c_2Efrac_2Efrac_nmr$ to be $\lambda V0f \in ty_2Efrac_2Efrac.(ap\ (c_2Epair_2EFST\ ty_2Efrac_2Efrac\ f))$.

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

$$c_2Enum_2EZERO_REP \in \omega \quad (8)$$

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

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

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

$$c_2Enum_2EABS_num \in (ty_2Enum_2Enum^{\omega}) \quad (10)$$

Definition 8 We define c_2Enum_2E0 to be $(ap\ c_2Enum_2EABS_num\ c_2Enum_2EZERO_REP)$.

Definition 9 We define $c_2Earithmetic_2EZERO$ to be c_2Enum_2E0 .

Definition 10 We define c_2Ebool_2EF to be $(ap\ (c_2Ebool_2E21\ 2)\ (\lambda V0t \in 2.V0t))$.

Definition 11 We define c_2Emin_2E40 to be $\lambda A.\lambda P \in 2^A.\mathbf{if}\ (\exists x \in A.p\ (ap\ P\ x))\ \mathbf{then}\ (the\ (\lambda x.x \in A \wedge P\ x))$ of type $\iota \Rightarrow \iota$.

Definition 12 We define c_2Ebool_2ECOND to be $\lambda A_27a : \iota.(\lambda V0t \in 2.(\lambda V1t1 \in A_27a.(\lambda V2t2 \in A_27a.(ap\ (c_2Ebool_2EF\ t1\ t2))))$

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

$$c_2Enum_2EREP_num \in (\omega^{ty_2Enum_2Enum}) \quad (11)$$

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

$$c_2Enum_2ESUC_REP \in (\omega^{\omega}) \quad (12)$$

Definition 13 We define c_2Enum_2ESUC to be $\lambda V0m \in ty_2Enum_2Enum.(ap\ c_2Enum_2EABS_num\ (ap\ c_2Enum_2EREP_num\ m))$

Let $c_2Earithmetic_2E2B : \iota$ be given. Assume the following.

$$c_2Earithmetic_2E2B \in ((ty_2Enum_2Enum^{ty_2Enum_2Enum})^{ty_2Enum_2Enum}) \quad (13)$$

Definition 14 We define $c_2Earithmetic_2EBIT1$ to be $\lambda V0n \in ty_2Enum_2Enum.(ap\ (ap\ c_2Earithmetic_2E2B\ n))$

Definition 15 We define $c_2Earithmic_2ENUMERAL$ to be $\lambda V0x \in ty_2Enum_2Enum.V0x$.

Let $c_2Einteger_2Eint_of_num : \iota$ be given. Assume the following.

$$c_2Einteger_2Eint_of_num \in (ty_2Einteger_2Eint^{ty_2Enum_2Enum}) \quad (14)$$

Let $c_2Einteger_2Eint_REP_CLASS : \iota$ be given. Assume the following.

$$c_2Einteger_2Eint_REP_CLASS \in ((2^{(ty_2Epair_2Eprod\ ty_2Enum_2Enum\ ty_2Enum_2Enum)}))^{ty_2Einteger_2Eint} \quad (15)$$

Definition 16 We define $c_2Einteger_2Eint_REP$ to be $\lambda V0a \in ty_2Einteger_2Eint.(ap\ (c_2Emin_2E_40\ t))$

Let $c_2Einteger_2Eint_neg : \iota$ be given. Assume the following.

$$c_2Einteger_2Eint_neg \in ((ty_2Epair_2Eprod\ ty_2Enum_2Enum\ ty_2Enum_2Enum)^{(ty_2Epair_2Eprod\ ty_2Enum_2Enum\ ty_2Enum_2Enum)}) \quad (16)$$

Let $c_2Einteger_2Eint_eq : \iota$ be given. Assume the following.

$$c_2Einteger_2Eint_eq \in ((2^{(ty_2Epair_2Eprod\ ty_2Enum_2Enum\ ty_2Enum_2Enum)})^{(ty_2Epair_2Eprod\ ty_2Enum_2Enum)}) \quad (17)$$

Let $c_2Einteger_2Eint_ABS_CLASS : \iota$ be given. Assume the following.

$$c_2Einteger_2Eint_ABS_CLASS \in (ty_2Einteger_2Eint^{(2^{(ty_2Epair_2Eprod\ ty_2Enum_2Enum\ ty_2Enum_2Enum)})}) \quad (18)$$

Definition 17 We define $c_2Einteger_2Eint_ABS$ to be $\lambda V0r \in (ty_2Epair_2Eprod\ ty_2Enum_2Enum\ ty_2Enum_2Enum)$

Definition 18 We define $c_2Einteger_2Eint_neg$ to be $\lambda V0T1 \in ty_2Einteger_2Eint.(ap\ c_2Einteger_2Eint)$

Let $c_2Einteger_2Eint_lt : \iota$ be given. Assume the following.

$$c_2Einteger_2Eint_lt \in ((2^{(ty_2Epair_2Eprod\ ty_2Enum_2Enum\ ty_2Enum_2Enum)})^{(ty_2Epair_2Eprod\ ty_2Enum_2Enum)}) \quad (19)$$

Definition 19 We define $c_2Einteger_2Eint_lt$ to be $\lambda V0T1 \in ty_2Einteger_2Eint.\lambda V1T2 \in ty_2Einteger$

Definition 20 We define $c_2EintExtension_2ESGN$ to be $\lambda V0x \in ty_2Einteger_2Eint.(ap\ (ap\ (ap\ (c_2Eboo$

Definition 21 We define $c_2Ebool_2E_7E$ to be $(\lambda V0t \in 2.(ap\ (ap\ c_2Emin_2E_3D_3D_3E\ V0t)\ c_2Ebool_2E$

Definition 22 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 23 We define $c_2Eprim_rec_2E_3C$ to be $\lambda V0m \in ty_2Enum_2Enum.\lambda V1n \in ty_2Enum_2Enum$

Definition 24 We define $c_2Earithmic_2EBIT2$ to be $\lambda V0n \in ty_2Enum_2Enum.(ap\ (ap\ c_2Earithmic$

Let $ty_2Erat_2Erat : \iota$ be given. Assume the following.

$$nonempty\ ty_2Erat_2Erat \quad (20)$$

Let $c_2Erat_2Erep_rat_CLASS : \iota$ be given. Assume the following.

$$c_2Erat_2Erep_rat_CLASS \in ((2^{ty_2Efrac_2Efrac})^{ty_2Erat_2Erat}) \quad (21)$$

Definition 25 We define $c_2Erat_2Erep_rat$ to be $\lambda V0a \in ty_2Erat_2Erat.(ap (c_2Emin_2E40 ty_2Efrac$

Definition 26 We define $c_2Efrac_2Efrac_sgn$ to be $\lambda V0f1 \in ty_2Efrac_2Efrac.(ap c_2EintExtension_2ES$

Definition 27 We define $c_2Erat_2Erat_sgn$ to be $\lambda V0r \in ty_2Erat_2Erat.(ap c_2Efrac_2Efrac_sgn (ap c_2$

Definition 28 We define $c_2Efrac_2Efrac_0$ to be $(ap c_2Efrac_2Eabs_frac (ap (ap (c_2Epair_2E2C ty_2$

Definition 29 We define $c_2Efrac_2Efrac_1$ to be $(ap c_2Efrac_2Eabs_frac (ap (ap (c_2Epair_2E2C ty_2$

Let $c_2Epair_2ESND : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall A_27a.nonempty A_27a \Rightarrow \forall A_27b.nonempty A_27b \Rightarrow c_2Epair_2ESND \\ A_27a A_27b \in (A_27b^{(ty_2Epair_2Eprod A_27a A_27b)}) \end{aligned} \quad (22)$$

Definition 30 We define $c_2Efrac_2Efrac_dnm$ to be $\lambda V0f \in ty_2Efrac_2Efrac.(ap (c_2Epair_2ESND t$

Let $c_2Einteger_2Etint_mul : \iota$ be given. Assume the following.

$$\begin{aligned} c_2Einteger_2Etint_mul \in (((ty_2Epair_2Eprod ty_2Enum_2Enum \\ ty_2Enum_2Enum)^{(ty_2Epair_2Eprod ty_2Enum_2Enum ty_2Enum_2Enum)})^{(ty_2Epair_2Eprod ty_2Enum_2Enum ty_2Enum_2Enum)}) \end{aligned} \quad (23)$$

Definition 31 We define $c_2Einteger_2Eint_mul$ to be $\lambda V0T1 \in ty_2Einteger_2Eint.\lambda V1T2 \in ty_2Einteg$

Definition 32 We define $c_2Erat_2Erat_equiv$ to be $\lambda V0f1 \in ty_2Efrac_2Efrac.\lambda V1f2 \in ty_2Efrac_2Efrac$

Let $c_2Erat_2Eabs_rat_CLASS : \iota$ be given. Assume the following.

$$c_2Erat_2Eabs_rat_CLASS \in (ty_2Erat_2Erat^{(2^{ty_2Efrac_2Efrac})}) \quad (24)$$

Definition 33 We define $c_2Erat_2Eabs_rat$ to be $\lambda V0r \in ty_2Efrac_2Efrac.(ap c_2Erat_2Eabs_rat_CL$

Definition 34 We define $c_2Erat_2Erat_1$ to be $(ap c_2Erat_2Eabs_rat c_2Efrac_2Efrac_1)$.

Let $c_2Einteger_2Etint_add : \iota$ be given. Assume the following.

$$\begin{aligned} c_2Einteger_2Etint_add \in (((ty_2Epair_2Eprod ty_2Enum_2Enum \\ ty_2Enum_2Enum)^{(ty_2Epair_2Eprod ty_2Enum_2Enum ty_2Enum_2Enum)})^{(ty_2Epair_2Eprod ty_2Enum_2Enum ty_2Enum_2Enum)}) \end{aligned} \quad (25)$$

Definition 35 We define $c_2Einteger_2Eint_add$ to be $\lambda V0T1 \in ty_2Einteger_2Eint.\lambda V1T2 \in ty_2Einteg$

Definition 36 We define $c_2Efrac_2Efrac_add$ to be $\lambda V0f1 \in ty_2Efrac_2Efrac.\lambda V1f2 \in ty_2Efrac_2Efrac$

Definition 37 We define $c_2Erat_2Erat_add$ to be $\lambda V0r1 \in ty_2Erat_2Erat.\lambda V1r2 \in ty_2Erat_2Erat.(ap$

Definition 38 We define $c_2Ecombin_2EK$ to be $\lambda A_27a : \iota.\lambda A_27b : \iota.(\lambda V0x \in A_27a.(\lambda V1y \in A_27b.V0x)$

Definition 39 We define $c_2Ecombin_2ES$ to be $\lambda A_27a : \iota.\lambda A_27b : \iota.\lambda A_27c : \iota.(\lambda V0f \in ((A_27c^{A_27b})^{A_27$

Definition 40 We define $c_Ecombin_2EI$ to be $\lambda A_27a : \iota.(ap (ap (c_Ecombin_2ES A_27a (A_27a^{A_27a}) A_27a) (c_Earithm_2Enum_CASE A_27a) \iota))$.
Let $c_Earithm_2Enum_CASE : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_Earithm_2Enum_CASE A_27a \in ((A_27a^{(A_27a^{ty_2Enum_2Enum})})_{A_27a})_{ty_2Enum_2Enum} \quad (26)$$

Definition 41 We define $c_Erat_2Erat_0$ to be $(ap c_Erat_2Eabs_rat c_Efrac_2Efrac_0)$.

Definition 42 We define $c_ERelation_2EWF$ to be $\lambda A_27a : \iota.\lambda V0R \in ((2^{A_27a})^{A_27a}).(ap (c_Ebool_2E21 A_27a) (c_Ebool_2EARB A_27a) \iota))$.
Let $c_Ebool_2EARB : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow c_Ebool_2EARB A_27a \in A_27a \quad (27)$$

Definition 43 We define $c_ERelation_2ERESTRICT$ to be $\lambda A_27a : \iota.\lambda A_27b : \iota.\lambda V0f \in (A_27b^{A_27a}).\lambda V1f \in (A_27b^{A_27a}).(ap (c_Ebool_2E21 A_27a) (c_Ebool_2EARB A_27a) \iota))$.

Definition 44 We define $c_ERelation_2ETC$ to be $\lambda A_27a : \iota.\lambda V0R \in ((2^{A_27a})^{A_27a}).\lambda V1a \in A_27a.\lambda V2b \in A_27a.(ap (c_Ebool_2E21 A_27a) (c_Ebool_2EARB A_27a) \iota))$.

Definition 45 We define $c_ERelation_2Eapprox$ to be $\lambda A_27a : \iota.\lambda A_27b : \iota.\lambda V0R \in ((2^{A_27a})^{A_27a}).\lambda V1M \in (A_27b^{A_27a}).(ap (c_Ebool_2E21 A_27a) (c_Ebool_2EARB A_27a) \iota))$.

Definition 46 We define $c_ERelation_2Ethe_fun$ to be $\lambda A_27a : \iota.\lambda A_27b : \iota.\lambda V0R \in ((2^{A_27a})^{A_27a}).\lambda V1M \in (A_27b^{A_27a}).(ap (c_Ebool_2E21 A_27a) (c_Ebool_2EARB A_27a) \iota))$.

Definition 47 We define $c_ERelation_2EWFREC$ to be $\lambda A_27a : \iota.\lambda A_27b : \iota.\lambda V0R \in ((2^{A_27a})^{A_27a}).\lambda V1M \in (A_27b^{A_27a}).(ap (c_Ebool_2E21 A_27a) (c_Ebool_2EARB A_27a) \iota))$.

Definition 48 We define $c_Erat_2Erat_of_num$ to be $(ap (ap (c_ERelation_2EWFREC ty_2Enum_2Enum A_27a) (c_Ebool_2EARB A_27a) \iota))$.
Assume the following.

$$True \quad (28)$$

Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow (\forall V0x \in A_27a.((V0x = V0x) \Leftrightarrow True)) \quad (29)$$

Assume the following.

$$\forall A_27a.nonempty A_27a \Rightarrow (\forall V0t1 \in A_27a.(\forall V1t2 \in A_27a.(((ap (ap (ap (c_Ebool_2ECOND A_27a) c_Ebool_2ET) V0t1) V1t2) = V0t1) \wedge ((ap (ap (ap (c_Ebool_2ECOND A_27a) c_Ebool_2EF) V0t1) V1t2) = V1t2)))))) \quad (30)$$

Assume the following.

$$(\forall V0a \in ty_2Einteger_2Eint.(\forall V1b \in ty_2Einteger_2Eint.(((ap (ap (ap c_2Einteger_2Eint_lt (ap c_2Einteger_2Eint_of_num c_2Enum_2E0)) V1b) \Rightarrow ((ap c_2Efrac_2Efrac_nrm (ap c_2Efrac_2Eabs_frac (ap (ap (c_2Epair_2E_2C ty_2Einteger_2Eint ty_2Einteger_2Eint) V0a) V1b))) = V0a)))))) \quad (31)$$

Assume the following.

$$\begin{aligned}
& (\forall V0n \in ty_2Enum_2Enum. (\forall V1m \in ty_2Enum_2Enum. (\\
& \quad ((p (ap (ap c_2Integer_2Eint_lt (ap c_2Integer_2Eint_of_num \\
& \quad c_2Enum_2E0)) (ap c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL \\
& \quad (ap c_2Arithmetic_2EBIT1 V0n)))))) \Leftrightarrow True) \wedge (((p (ap (ap c_2Integer_2Eint_lt \\
& (ap c_2Integer_2Eint_of_num c_2Enum_2E0)) (ap c_2Integer_2Eint_of_num \\
& (ap c_2Arithmetic_2ENUMERAL (ap c_2Arithmetic_2EBIT2 V0n)))))) \Leftrightarrow \\
& \quad True) \wedge (((p (ap (ap c_2Integer_2Eint_lt (ap c_2Integer_2Eint_of_num \\
& c_2Enum_2E0)) (ap c_2Integer_2Eint_of_num c_2Enum_2E0))) \Leftrightarrow \\
& \quad False) \wedge (((p (ap (ap c_2Integer_2Eint_lt (ap c_2Integer_2Eint_of_num \\
& c_2Enum_2E0)) (ap c_2Integer_2Eint_neg (ap c_2Integer_2Eint_of_num \\
& (ap c_2Arithmetic_2ENUMERAL V0n)))))) \Leftrightarrow False) \wedge (((p (ap (ap c_2Integer_2Eint_lt \\
& (ap c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL \\
& V0n)) (ap c_2Integer_2Eint_of_num c_2Enum_2E0))) \Leftrightarrow False) \wedge \\
& \quad (((p (ap (ap c_2Integer_2Eint_lt (ap c_2Integer_2Eint_neg \\
& (ap c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL \\
& (ap c_2Arithmetic_2EBIT1 V0n)))))) (ap c_2Integer_2Eint_of_num \\
& c_2Enum_2E0))) \Leftrightarrow True) \wedge (((p (ap (ap c_2Integer_2Eint_lt (ap \\
& c_2Integer_2Eint_neg (ap c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL \\
& (ap c_2Arithmetic_2EBIT2 V0n)))))) (ap c_2Integer_2Eint_of_num \\
& c_2Enum_2E0))) \Leftrightarrow True) \wedge (((p (ap (ap c_2Integer_2Eint_lt (ap \\
& c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL V0n))) \\
& (ap c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL \\
& V1m)))) \Leftrightarrow (p (ap (ap c_2Eprim_rec_2E_3C V0n) V1m))) \wedge (((p (ap (ap \\
& c_2Integer_2Eint_lt (ap c_2Integer_2Eint_neg (ap c_2Integer_2Eint_of_num \\
& (ap c_2Arithmetic_2ENUMERAL (ap c_2Arithmetic_2EBIT1 V0n)))))) \\
& (ap c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL \\
& V1m)))) \Leftrightarrow True) \wedge (((p (ap (ap c_2Integer_2Eint_lt (ap c_2Integer_2Eint_neg \\
& (ap c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL \\
& (ap c_2Arithmetic_2EBIT2 V0n)))))) (ap c_2Integer_2Eint_of_num \\
& (ap c_2Arithmetic_2ENUMERAL V1m)))) \Leftrightarrow True) \wedge (((p (ap (ap c_2Integer_2Eint_lt \\
& (ap c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL \\
& V0n)) (ap c_2Integer_2Eint_neg (ap c_2Integer_2Eint_of_num \\
& (ap c_2Arithmetic_2ENUMERAL V1m)))))) \Leftrightarrow False) \wedge ((p (ap (ap c_2Integer_2Eint_lt \\
& (ap c_2Integer_2Eint_neg (ap c_2Integer_2Eint_of_num (\\
& ap c_2Arithmetic_2ENUMERAL V0n)))) (ap c_2Integer_2Eint_neg \\
& (ap c_2Integer_2Eint_of_num (ap c_2Arithmetic_2ENUMERAL \\
& V1m)))))) \Leftrightarrow (p (ap (ap c_2Eprim_rec_2E_3C V1m) V0n)))))))))
\end{aligned} \tag{32}$$

Assume the following.

$$((ap c_2Erat_2Erat_of_num c_2Enum_2E0) = (ap c_2Erat_2Eabs_rat \\
c_2Efrac_2Efrac_0)) \tag{33}$$

Assume the following.

$$\begin{aligned}
 & (\forall V0f1 \in ty_2Efrac_2Efrac.((ap_c_2Efrac_2Efrac_sgn (\\
 & ap_c_2Erat_2Erep_rat (ap_c_2Erat_2Eabs_rat V0f1))) = (ap_c_2Efrac_2Efrac_sgn \\
 & V0f1)))
 \end{aligned}
 \tag{34}$$

Theorem 1

$$\begin{aligned}
 & ((ap_c_2Erat_2Erat_sgn (ap_c_2Erat_2Erat_of_num_c_2Enum_2E0)) = \\
 & (ap_c_2Einteger_2Eint_of_num_c_2Enum_2E0))
 \end{aligned}$$