ISO/IEC JTC1/SC2/WG2 **N5336R2**
LUCP L-2604

Universal Multiple-Octet Coded Character Set
International Organization for Standardization
Internationale Standardisierungs-Organisation
Organisation Internationale de Normalisation
Διεθνής Οργανισμός Τυποποίησης
Международная организация по стандартизации

Doc Type: Working Group Document

Title: Proposal to encode miscellaneous scientific symbols

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Version: 3rd revision
Status: forward to UTC / WG2
Action: for UTC review, for Unicode 18.0 pipeline
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Requester's reference: LUCP L-2604

1. Background – Miscellaneous symbols in historic sources

This proposal is part of the research program upon historical mathematical sources, conducted by the CNRS Philiumm project (headed by Prof. David Rabouin, University of Paris) and supported by researchers from the Landesbibliothek Hanover (Germany). The aim of this project work is to achieve a standardized encoding for special mathematical characters in historic texts, which is required for accurate facsilime editions of those sources.
For more background information about the Philiumm project and the related research work, please visit the Philiumm website or see doc. no. N5277.
In this proposal we introduce a number of various symbols mainly from the field of historical mathematics.

2. Revision

2nd version: After discussion with SEWG and UTC experts and following the subsequent recommendations, we have dropped a few candidates (for various reasons) and propose now a selection of 13 new characters, of which 3 are combining characters.

In this 3rd revision the three combing characters ◌͡, ◌͜ and ◌͠ are omitted. They will be revised seperately and will be subject to a new proposal, alongside further new characters of a similar kind. The remaining 10 characters have not caused any further critique during the January 15 meeting, so we understand that they are regarded mature for encoding.

3. Characters

If this proposal gets accepted, the following 10 characters will exist:

- CASTING-OUT-NINES
- LUNATE ENCIRCLED DIGIT ONE
- PROPORTION WITH ONE STROKE
- PROPORTION WITH TWO STROKES
- INFINITY WITH TWO DOTS
- INVOLVED
- LEIBNIZIAN ENCIRCLED V
- LEIBNIZIAN ENCIRCLED V IN BOX
- SUPERSCRIPT WAVE SYMBOL
- SUPERSCRIPT WAVE WITH OVERLINE SYMBOL

4. Figures and explanations

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Als men de $\angle ACB$ wil 2 mahl in 2 gelijcke deel, deelen; om AF te vinden, soo kan men het dus oock doen[:]

Regel.

Gelijck als

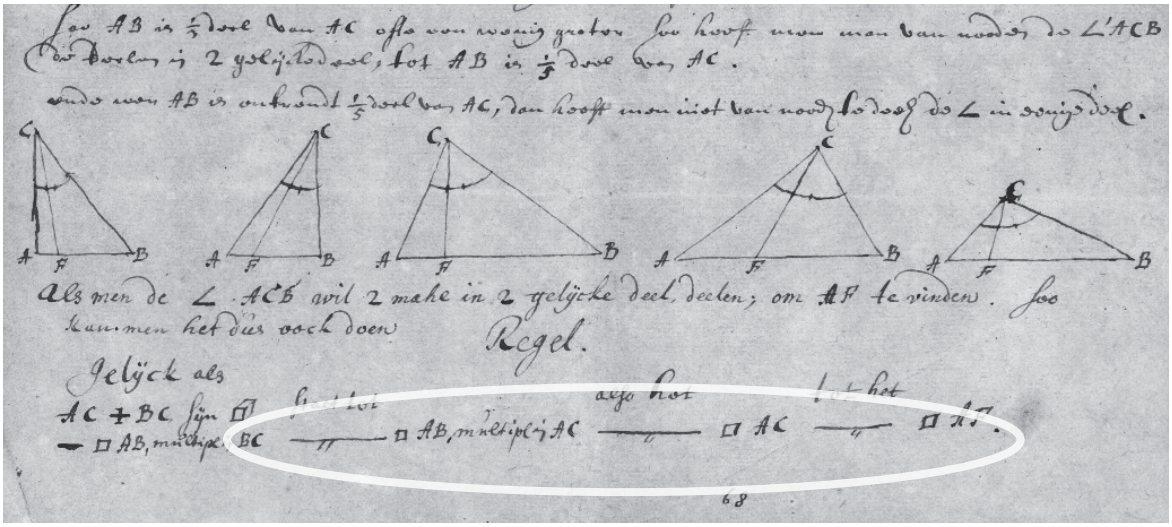
$AC + BC$, sijn $\square$ staet tot also het tot het

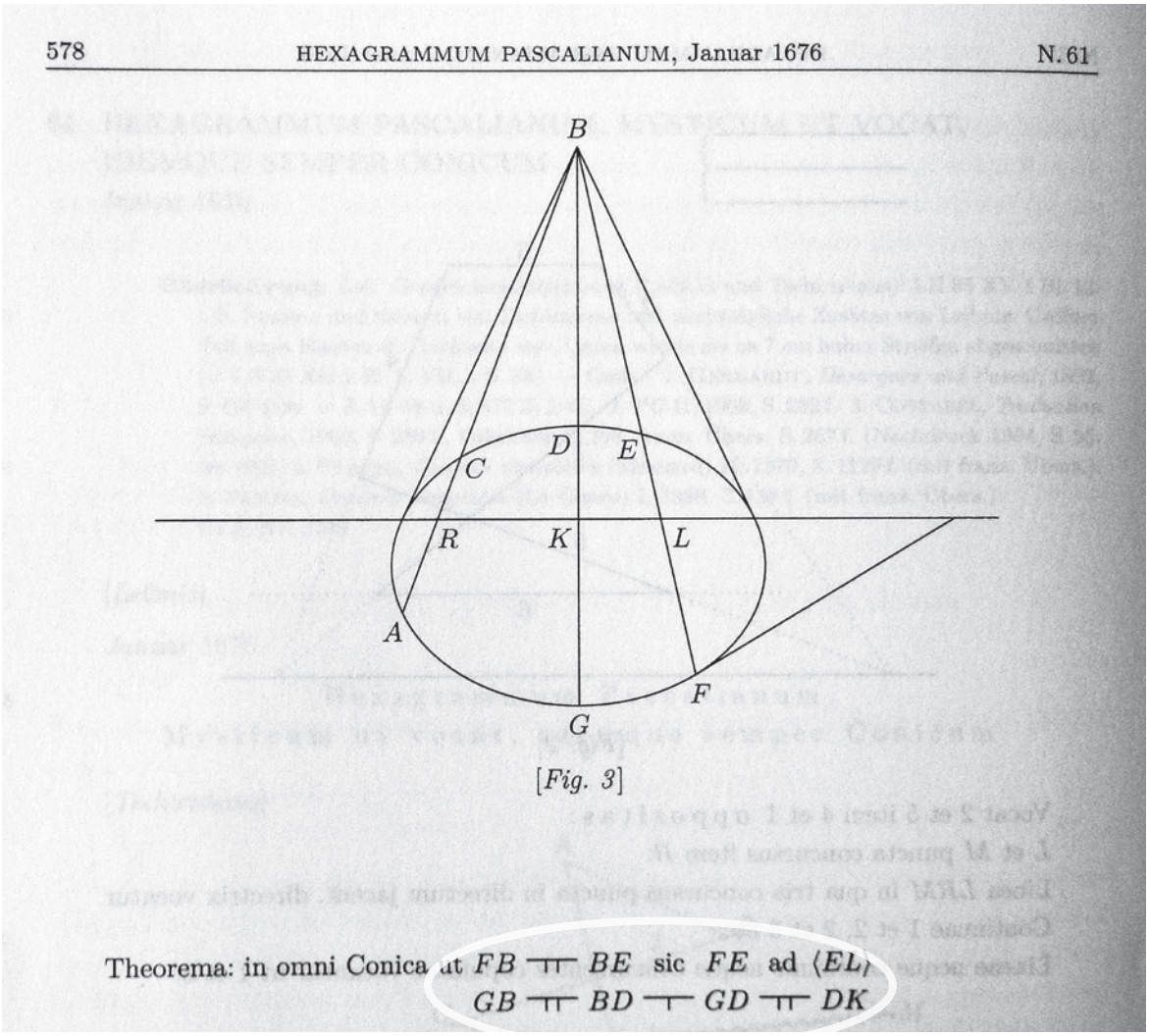
$-\square AB$, multipl. in BC $\sqcap\!\sqcap$ $\square AB$, multipl. in AC $\sqcap\!\sqcap$ $\square AC$ $\sqcap\!\sqcap$ $\square AF$.

⫟ PROPORTION WITH TWO STROKES

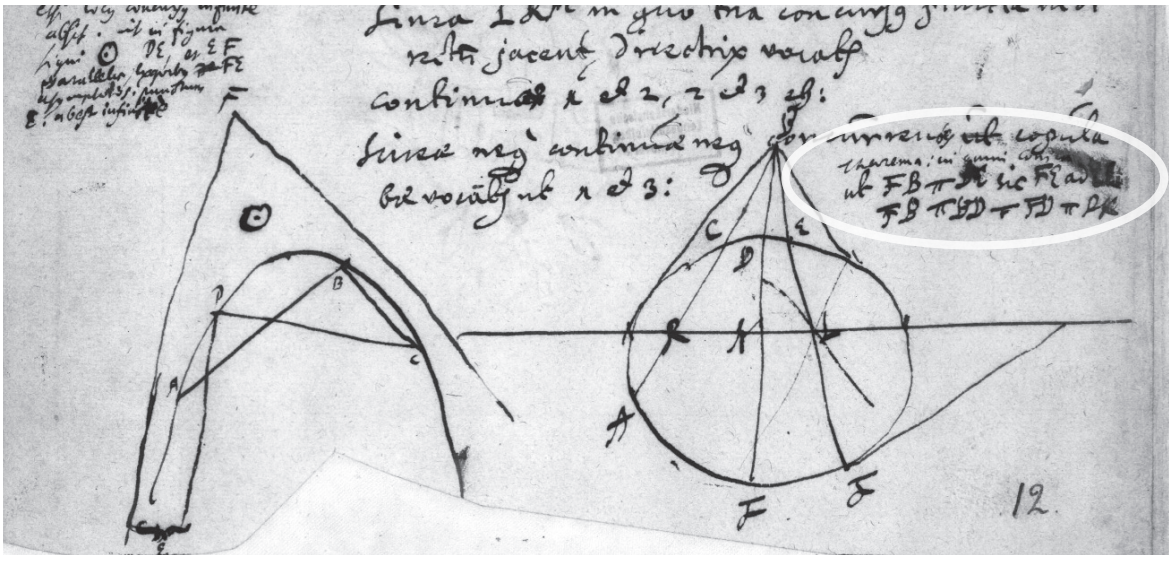
This figure also shows the use of ◱ WHITE CUBE (proposed in doc. L-2514 for u1F7F7).

LAA VII-6 P. 302; LH 35 VIII 30, fol. 68r (below)

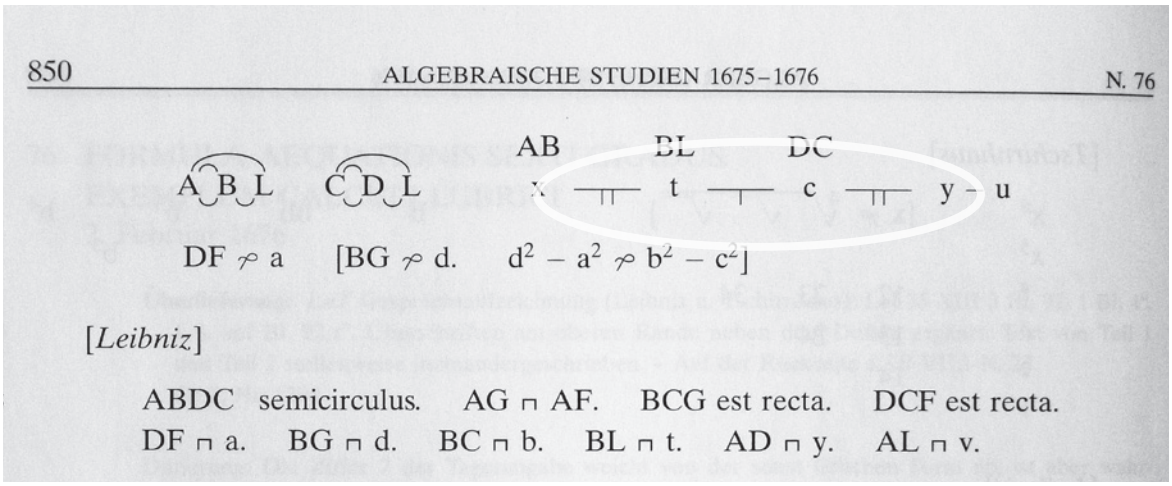




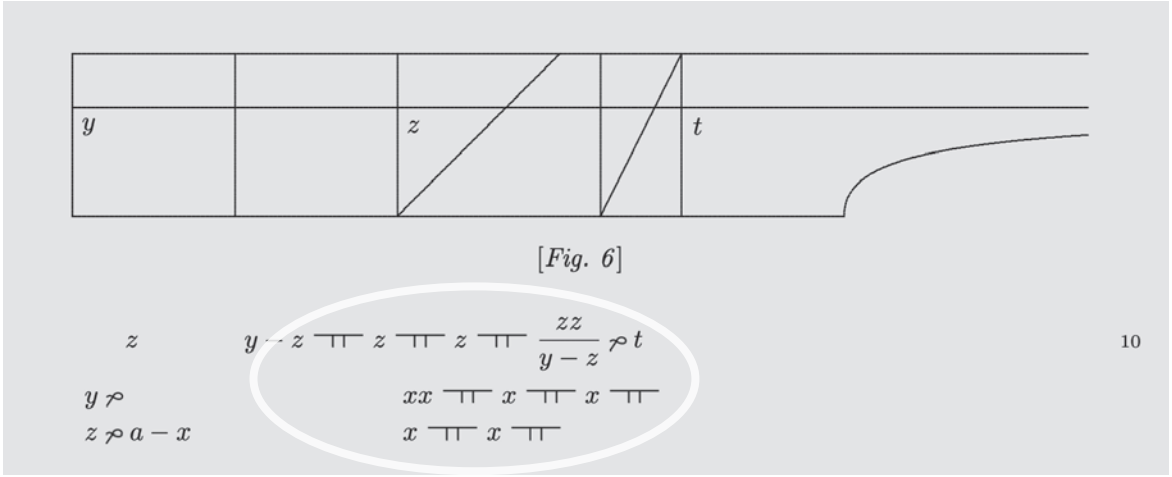
⫟ PROPORTION WITH ONE STROKE, ⫟ PROPORTION WITH TWO STROKES
LAA VII-7 p. 578



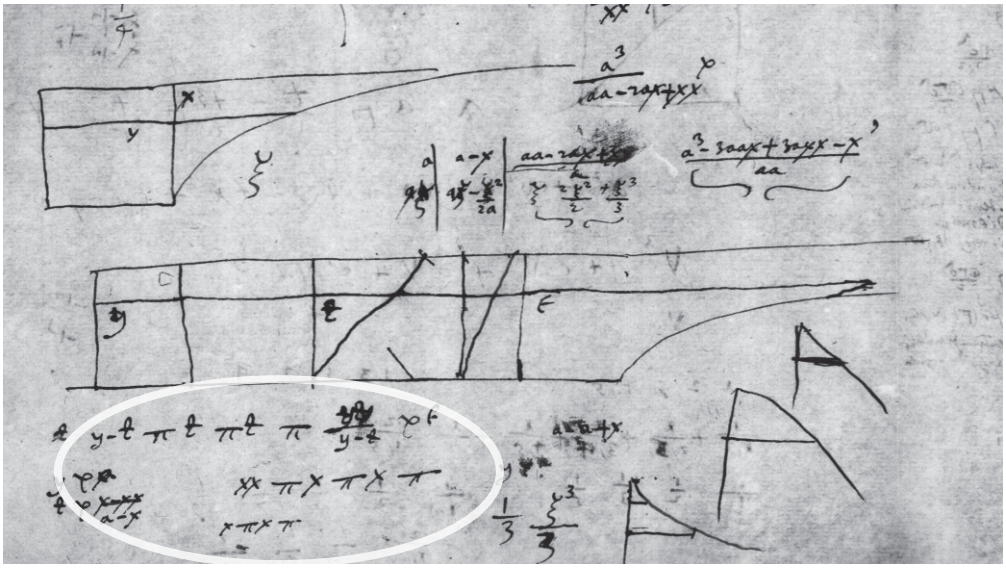
⫟ PROPORTION WITH ONE STROKE, ⫟ PROPORTION WITH TWO STROKES
LH 35 XV 1, fol. 12r



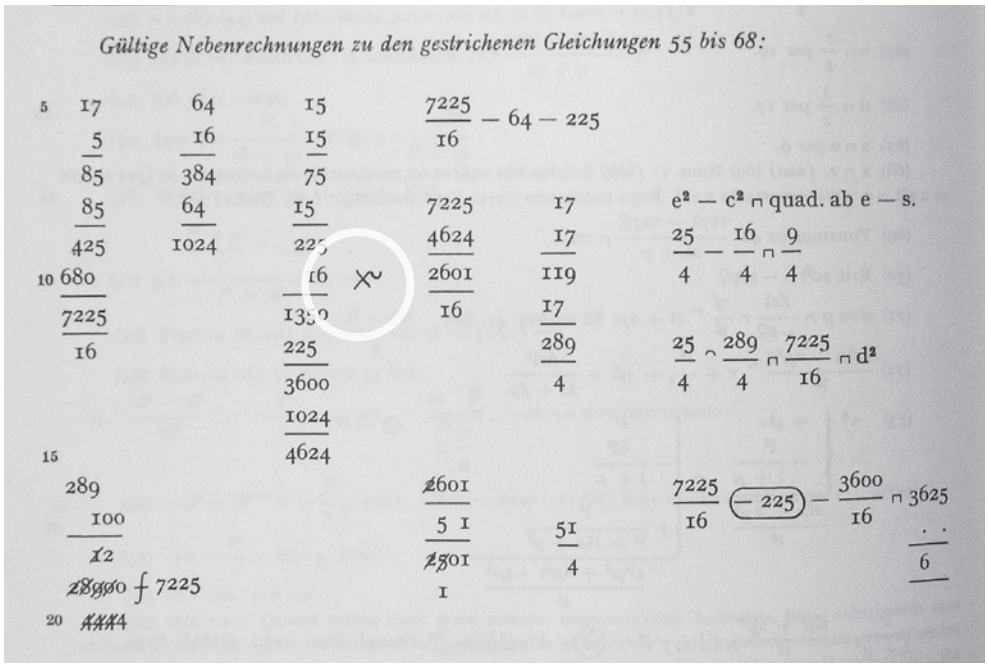
⫟ PROPORTION WITH ONE STROKE, ⫪ PROPORTION WITH TWO STROKES
LAA VII-2 p. 850



⫪ PROPORTION WITH TWO STROKES
LAA VII-6 p. 271



⫪ PROPORTION WITH TWO STROKES
LH 35 V 6, fol. 10v



Gültige Nebenrechnungen zu den gestrichenen Gleichungen 55 bis 68:

5 17 / 5 / 85 / 85 / 425 / 10 680 / 7225 / 16

64 / 16 / 384 / 64 / 1024

15 / 15 / 75 / 15 / 225 / 16 / 1350 / 225 / 3600 / 1024 / 4624

7225/16 − 64 − 225

7225 / 4624 / 2601 / 16

17 / 17 / 119 / 17 / 289 / 4

$e^2 - c^2 \sqcap$ quad. ab e — s.

$\frac{25}{4} - \frac{16}{4} \sqcap \frac{9}{4}$

$\frac{25}{4} \frown \frac{289}{4} \sqcap \frac{7225}{16} \sqcap d^2$

15 289 / 100 / ✗2 / ~~28900~~ ∫ 7225

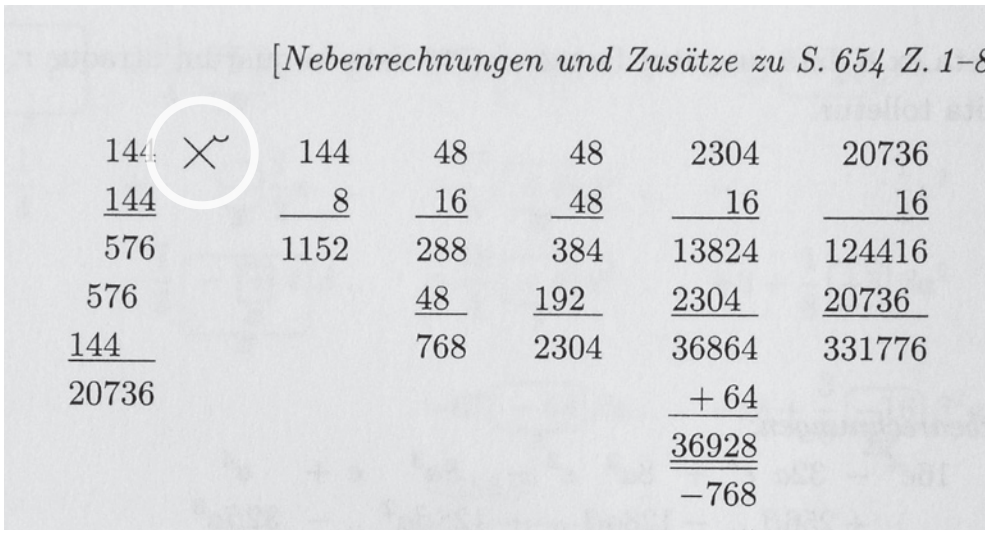
20 ~~4444~~

~~2601~~ / 5 1 / ~~2501~~ / 1

51 / 4

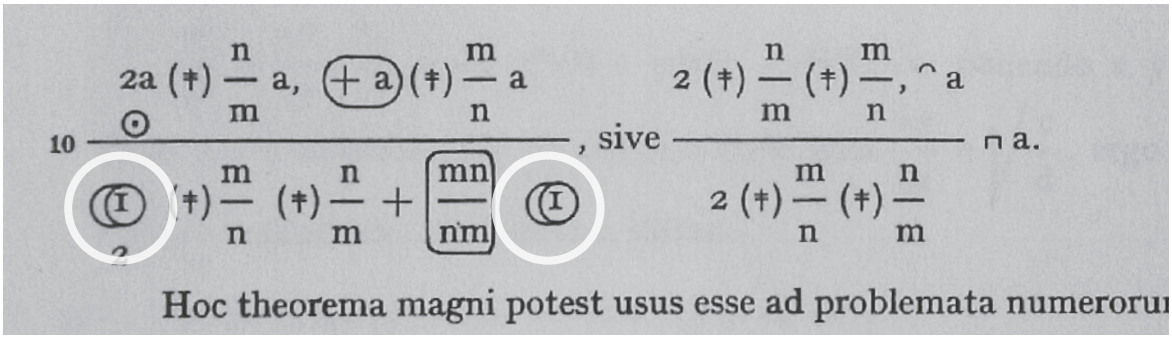
$\frac{7225}{16} \ominus 225 - \frac{3600}{16} \sqcap 3625$ . . / 6

× CASTING-OUT-NINES
LAA VII-1 p. 408; VII-3 p.660 (below)



[Nebenrechnungen und Zusätze zu S. 654 Z. 1–8

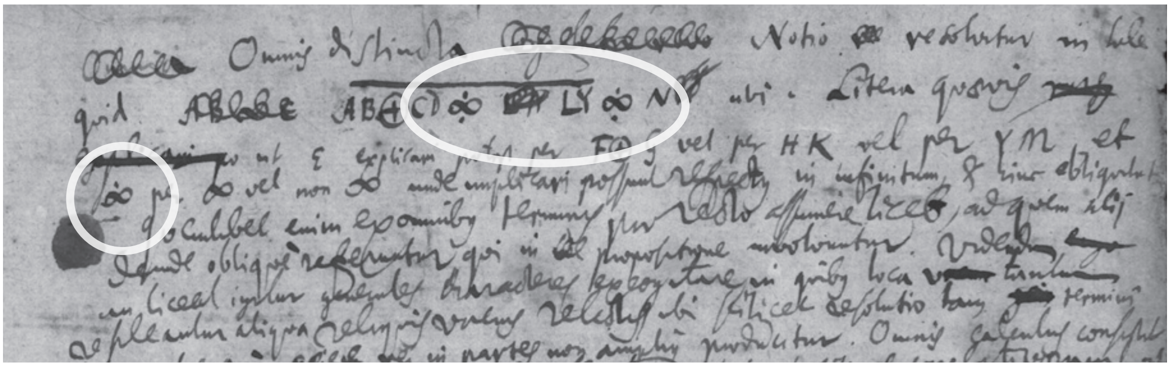
144	144	48	48	2304	20736
144	8	16	48	16	16
576	1152	288	384	13824	124416
576		48	192	2304	20736
144		768	2304	36864	331776
20736				+ 64	
				36928	
				−768	



$$10\ \frac{2a\,(\dagger)\frac{n}{m}\,a,\ (+a)\,(\dagger)\frac{m}{n}\,a}{(\dagger)\frac{m}{n}\,(\dagger)\frac{n}{m} + \frac{mn}{nm}}\ \text{, sive}\ \frac{2\,(\dagger)\frac{n}{m}\,(\dagger)\frac{m}{n}\,\frown a}{2\,(\dagger)\frac{m}{n}\,(\dagger)\frac{n}{m}} \sqcap a.$$

Hoc theorema magni potest usus esse ad problemata numerorui

① LUNATE ENCIRCLED DIGIT ONE
LAA VII-1 p. 472



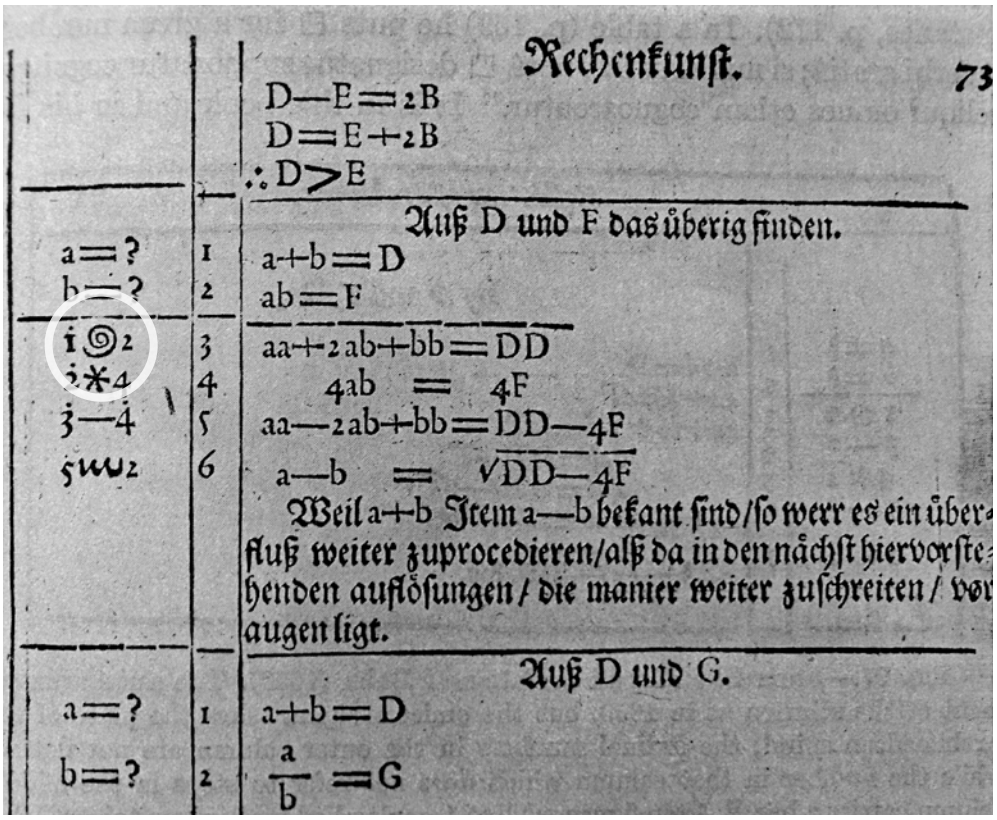
∞̣̇ INFINITY WITH DOTS
LH 4 VII B 2, fol. 73v (top), LAA VI-4 p. 873 (below)

Omnia ad haec videntur revocari posse. Aliquidditas. Essentia. Existentia. Realitas. Perfectio. Uni[tas.] Convenientia. Veritas. Consequentia. Ordo. Causalitas. Mutatio. Magnitudo. Sensus. Appetitus. Cogitatio. Qualitates Sensibiles.

⟨ – ⟩ in characteristica omnia distincte cogitabilia revocari possunt ad $\overline{AB + CD \underset{\text{non}\ \infty}{\overset{\infty}{}} LM} \infty N$, hoc uno not⟨ato⟩ ⟨ – – – ⟩ et contra explicari ⟨ – – – ⟩ quod quaedam literae in ⟨ – ⟩ ut Y pro S pon⟨–⟩

Omnis distincta Notio resolvitur in tale quid $\overline{AB \oplus CD ⧞ LY}$ ⧞ N ubi Litera quaevis ut E explicari potest per $F \oplus G$ vel per HK vel per YM et ⧞ per ∞ vel *non* ∞ unde implicari possunt respectus in infinitum, et hinc obliquitat[es].

Quemlibet enim ex omnibus terminis pro recto assumere licet, ad quem alii deinde oblique referuntur, qui in propositione involvuntur. Videndum an liceat igitur generales



Rechenkunſt. 73

D—E = 2B
D = E+2B
∴ D > E

Auß D und F das überig finden.

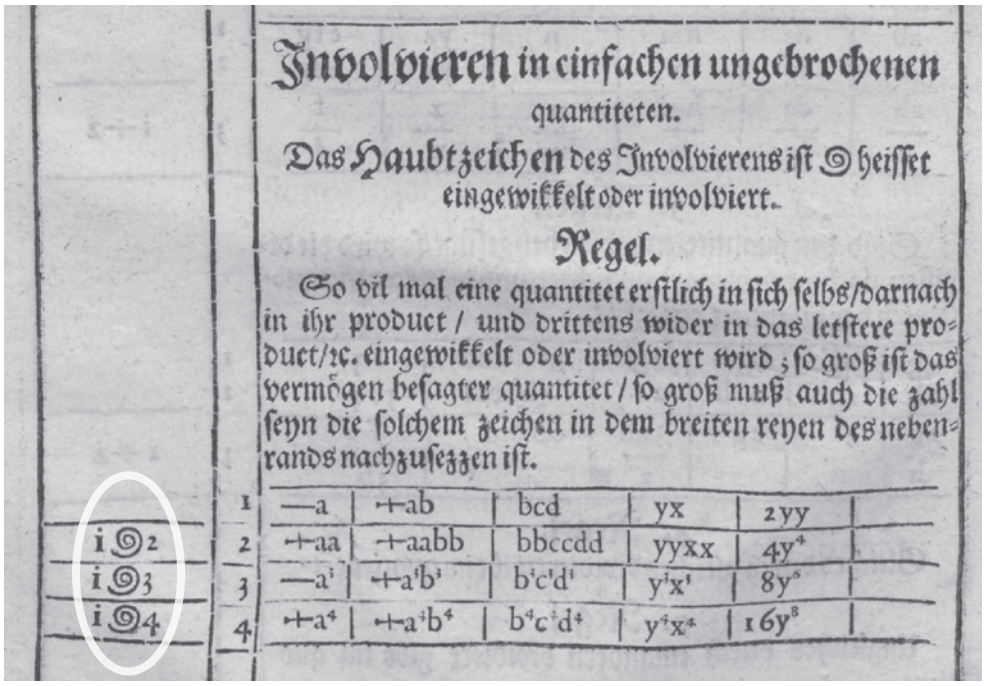
a = ?	1	a+b = D
b = ?	2	ab = F
i ◎ 2	3	aa+2ab+bb = DD
i ✱ 4	4	4ab = 4F
3—4	5	aa—2ab+bb = DD—4F
5 ww 2	6	a—b = √DD—4F

Weil a+b Item a—b bekant ſind/ſo werr es ein überfluß weiter zuprocedieren/alß da in den nächſt hiervorſtehenden auflöſungen/ die manier weiter zuſchreiten/ vor augen ligt.

Auß D und G.

a = ?	1	a+b = D
b = ?	2	a/b = G

◎ INVOLVED – J. H. Rahn, Teutsche Algebra, 1659 (after Cajori).
In expressions of the form *a* ◎ *b*, the sign ◎ is used to denote the exponentiation of *a* by the power of *b*. In his “Teutsche Algebra” from 1659, the swiss mathematician Johann Heinrich Rahn refers to the operation as “involvieren” (= to involve).



Involvieren in einfachen ungebrochenen quantiteten.

Das Haubtzeichen des Involvierens iſt ◎ heiſſet eingewikkelt oder involviert.

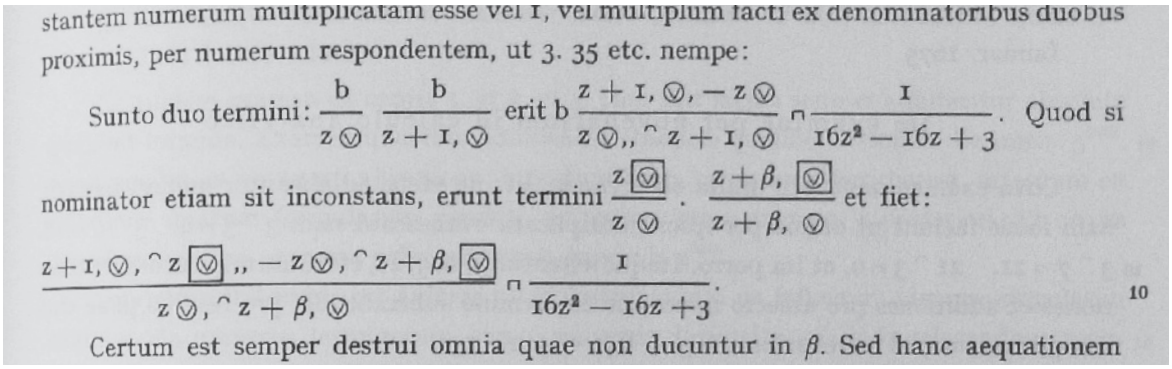
Regel.

So vil mal eine quantitet erſtlich in ſich ſelbs/darnach in ihr product / und drittens wider in das letſtere product/ꝛc. eingewikkelt oder involviert wird ; ſo groß iſt das vermögen beſagter quantitet / ſo groß muß auch die zahl ſeyn die ſolchem zeichen in dem breiten reyen des nebenrands nachzuſezzen iſt.

1	—a	+ab	bcd	yx	2yy
i ◎ 2	2	+aa	+aabb	bbccdd	yyxx	$4y^4$
i ◎ 3	3	$-a^3$	$+a^3b^3$	$b^3c^3d^3$	y^3x^3	$8y^6$
i ◎ 4	4	$+a^4$	$+a^4b^4$	$b^4c^4d^4$	y^4x^4	$16y^8$

◎ INVOLVED – J. H. Rahn, Teutsche Algebra, 1659.

In the time of Leibniz, the usual way of referring to curves or magnitudes is by giving equations that describe their specific relations. The concept of mapping as it is used in modern mathematics is not yet developed. Leibniz writes the signs Ⓥ and 🄥 to the right of an expression (such as *x* Ⓥ and *y+1*, 🄥) in order to denote two different arbitrary rules by which the expressions given in the left position are treated. The result is an expression. By this, the meaning is similar to writing *f(x)* or *g(y+1)* in modern mathematical notation with *f* and *g* denoting arbitrary functions.
In a similar way, Johann Bernoulli uses the sign ℘ (see L-2535/N5335R) to denote a quantity depending on variables *x* and *a* (in modern terminology a function in *x* and *a*).



stantem numerum multiplicatam esse vel 1, vel multiplum facti ex denominatoribus duobus proximis, per numerum respondentem, ut 3. 35 etc. nempe:

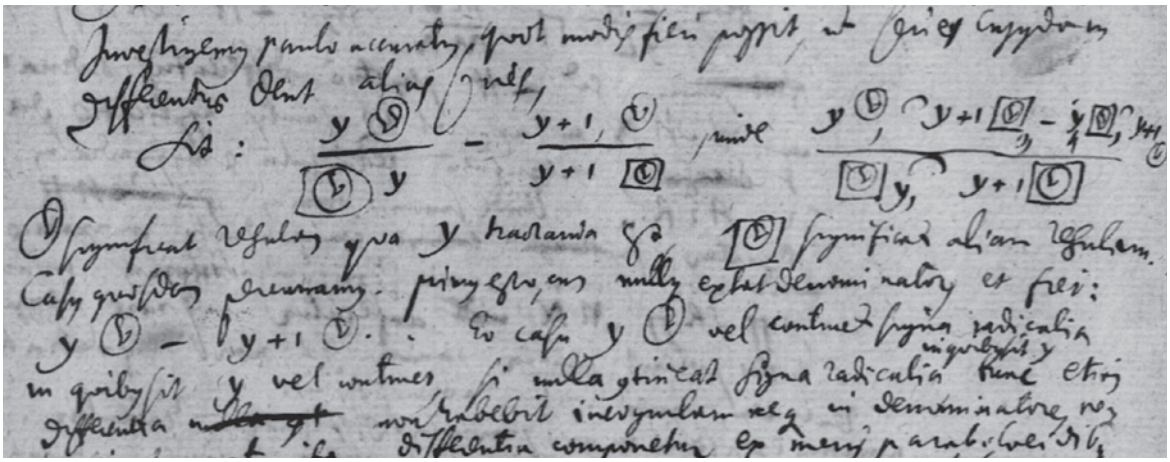
Sunto duo termini: $\frac{b}{z\,Ⓥ}\quad\frac{b}{z+1,\,Ⓥ}$ erit $b\,\frac{z+1,\,Ⓥ,-z\,Ⓥ}{z\,Ⓥ,,\hat{}\,z+1,\,Ⓥ}\sqcap\frac{1}{16z^2-16z+3}$. Quod si nominator etiam sit inconstans, erunt termini $\frac{z\,🄥}{z\,Ⓥ}\cdot\frac{z+\beta,\,🄥}{z+\beta,\,Ⓥ}$ et fiet:

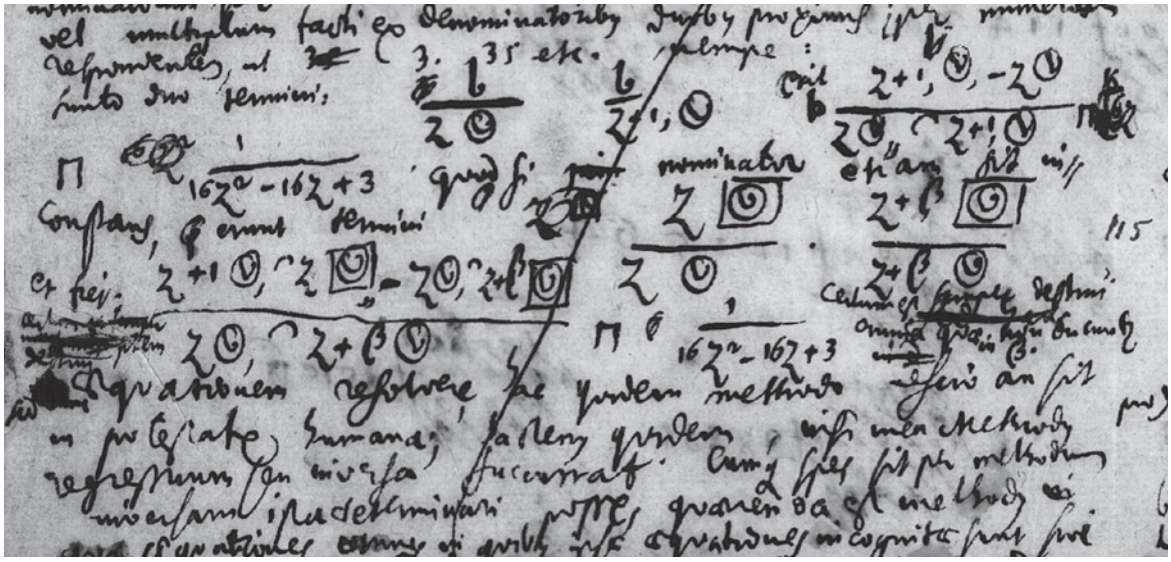
$$\frac{z+1,\,Ⓥ,\hat{}\,z\,🄥,,-z\,Ⓥ,\hat{}\,z+\beta,\,🄥}{z\,Ⓥ,\hat{}\,z+\beta,\,Ⓥ}\sqcap\frac{1}{16z^2-16z+3}.$$

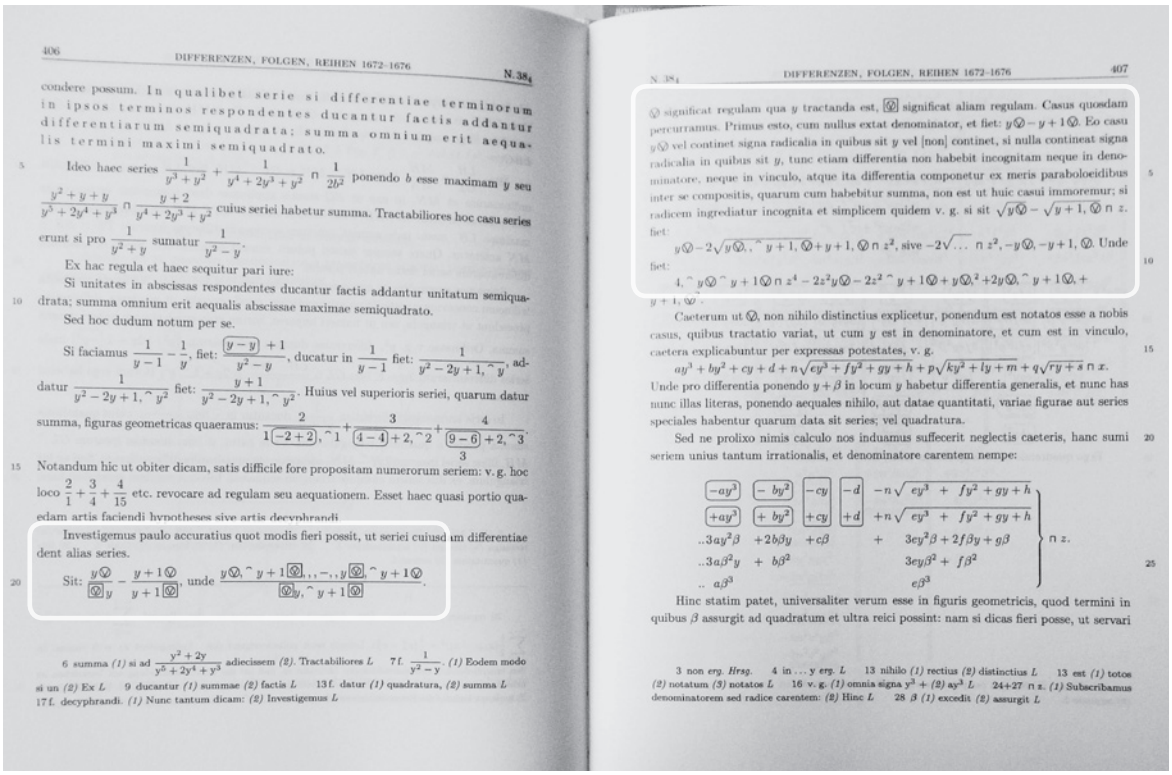
10

Certum est semper destrui omnia quae non ducuntur in β. Sed hanc aequationem

Ⓥ LEIBNIZIAN ENCIRCLED V, 🄥 LEIBNIZIAN ENCIRCLED V IN BOX
LAA VII-1 p. 527 (above), LH 35 V 4, fol. 6 (below), LH 35 VIII 30, fol. 115r (bottom)







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condere possum. In qualibet serie si differentiae terminorum in ipsos terminos respondentes ducantur factis addantur differentiarum semiquadrata; summa omnium erit aequalis termini maximi semiquadrato.

Ideo haec series $\frac{1}{y^3+y^2} + \frac{1}{y^4+2y^3+y^2} \sqcap \frac{1}{2b^2}$ ponendo b esse maximam y seu $\frac{y^2+y+y}{y^5+2y^4+y^3} \sqcap \frac{y+2}{y^4+2y^3+y^2}$ cuius seriei habetur summa. Tractabiliores hoc casu series erunt si pro $\frac{1}{y^2+y}$ sumatur $\frac{1}{y^2-y}$.

Ex hac regula et haec sequitur pari iure:

Si unitates in abscissas respondentes ducantur factis addantur unitatum semiquadrata; summa omnium erit aequalis abscissae maximae semiquadrato.

Sed hoc dudum notum per se.

Si faciamus $\frac{1}{y-1} - \frac{1}{y}$, fiet: $\frac{(y-y)+1}{y^2-y}$, ducatur in $\frac{1}{y-1}$ fiet: $\frac{1}{y^2-2y+1,\hat{}\,y}$, addatur $\frac{1}{y^2-2y+1,\hat{}\,y^2}$ fiet: $\frac{y+1}{y^2-2y+1,\hat{}\,y^2}$. Huius vel superioris seriei, quarum datur summa, figuras geometricas quaeramus: $\frac{2}{1\overline{-2+2},\hat{}\,1} + \frac{3}{\overline{4-4}+2,\hat{}\,2} + \frac{4}{\overline{9-6}+2,\hat{}\,3}$.

Notandum hic ut obiter dicam, satis difficile fore propositam numerorum seriem: v. g. hoc loco $\frac{2}{1}+\frac{3}{4}+\frac{4}{15}$ etc. revocare ad regulam seu aequationem. Esset haec quasi portio quaedam artis faciendi hypotheses sive artis decyphrandi.

Investigemus paulo accuratius quot modis fieri possit, ut seriei cuiusd um differentiae dent alias series.

Sit: $\frac{y\textcircled{V}}{\boxed{\textcircled{V}}y} - \frac{y+1\textcircled{V}}{y+1\boxed{\textcircled{V}}}$, unde $\frac{y\textcircled{V},\hat{}\,y+1\boxed{\textcircled{V}},,,-,,y\boxed{\textcircled{V}},\hat{}\,y+1\textcircled{V}}{\boxed{\textcircled{V}}y,\hat{}\,y+1\boxed{\textcircled{V}}}$.

6 summa *(1)* si ad $\frac{y^2+2y}{y^5+2y^4+y^3}$ adiecissem *(2)*. Tractabiliores *L* 7 f. $\frac{1}{y^2-y}$. *(1)* Eodem modo si un *(2)* Ex *L* 9 ducantur *(1)* summae *(2)* factis *L* 13 f. datur *(1)* quadratura, *(2)* summa *L* 17 f. decyphrandi. *(1)* Nunc tantum dicam: *(2)* Investigemus *L*

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Ⓥ significat regulam qua y tractanda est, $\boxed{\textcircled{V}}$ significat aliam regulam. Casus quosdam percurramus. Primus esto, cum nullus extat denominator, et fiet: $y\textcircled{V} - y + 1\textcircled{V}$. Eo casu $y\textcircled{V}$ vel continet signa radicalia in quibus sit y vel [non] continet, si nulla contineat signa radicalia in quibus sit y, tunc etiam differentia non habebit incognitam neque in denominatore, neque in vinculo, atque ita differentia componetur ex meris paraboloeidibus inter se compositis, quarum cum habebitur summa, non est ut huic casui immoremur; si radicem ingrediatur incognita et simplicem quidem v. g. si sit $\sqrt{y\textcircled{V}} - \sqrt{y+1,\textcircled{V}} \sqcap z$. fiet:

$y\textcircled{V} - 2\sqrt{y\textcircled{V},\hat{}\,y+1,\textcircled{V}} + y + 1,\textcircled{V} \sqcap z^2$, sive $-2\sqrt{\ldots} \sqcap z^2, -y\textcircled{V}, -y+1,\textcircled{V}$. Unde fiet:

$4,\hat{}\,y\textcircled{V}\,\hat{}\,y+1\textcircled{V} \sqcap z^4 - 2z^2 y\textcircled{V} - 2z^2\,\hat{}\,y+1\textcircled{V} + y\textcircled{V},^2 + 2y\textcircled{V},\hat{}\,y+1\textcircled{V},+ y+1,\textcircled{V}^2$.

Caeterum ut Ⓥ, non nihilo distinctius explicetur, ponendum est notatos esse a nobis casus, quibus tractatio variat, ut cum y est in denominatore, et cum est in vinculo, caetera explicabuntur per expressas potestates, v. g.

$ay^3 + by^2 + cy + d + n\sqrt{ey^3 + fy^2 + gy + h} + p\sqrt{ky^2 + ly + m} + q\sqrt{ry + s} \sqcap x$.

Unde pro differentia ponendo $y + \beta$ in locum y habetur differentia generalis, et nunc has nunc illas literas, ponendo aequales nihilo, aut datae quantitati, variae figurae aut series speciales habentur quarum data sit series; vel quadratura.

Sed ne prolixo nimis calculo nos induamus suffecerit neglectis caeteris, hanc sumi seriem unius tantum irrationalis, et denominatore carentem nempe:

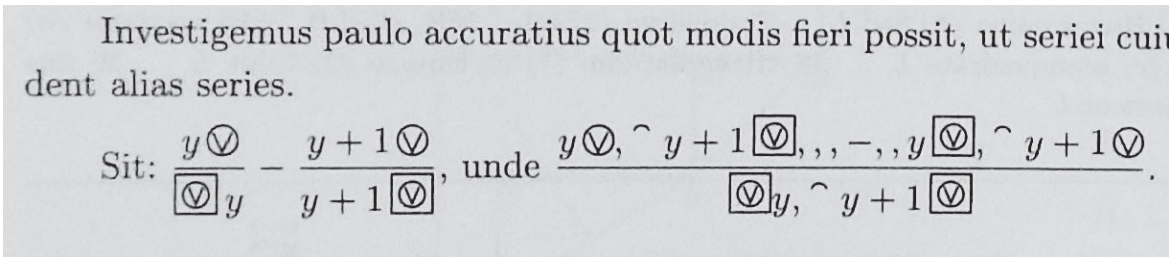
$$\left.\begin{array}{llll} \boxed{-ay^3} & \boxed{-by^2} & \boxed{-cy} & \boxed{-d} \\ \boxed{+ay^3} & \boxed{+by^2} & \boxed{+cy} & \boxed{+d} \\ \ldots 3a\beta^2 y & +2b\beta y & +c\beta & \\ \ldots 3a\beta^2 y & +b\beta^2 & & \\ \ldots\ a\beta^3 & & & \end{array}\right\} \begin{array}{l} -n\sqrt{ey^3 + fy^2 + gy + h} \\ +n\sqrt{ey^3 + fy^2 + gy + h} \\ +3ey^2\beta + 2f\beta y + g\beta \\ +3ey\beta^2 + f\beta^2 \\ +e\beta^3 \end{array} \Bigg\} \sqcap z.$$

Hinc statim patet, universaliter verum esse in figuris geometricis, quod termini in quibus β assurgit ad quadratum et ultra reici possint: nam si dicas fieri posse, ut servari

3 non *erg. Hrsg.* 4 in ... y *erg. L* 13 nihilo *(1)* rectius *(2)* distinctius *L* 13 est *(1)* totos *(2)* notatum *(3)* notatos *L* 16 v. g. *(1)* omnia signa y^3 + *(2)* ay^3 *L* 24+27 $\sqcap z$. *(1)* Subscribamus denominatorem sed radice carentem: *(2)* Hinc *L* 28 β *(1)* excedit *(2)* assurgit *L*

Ⓥ LEIBNIZIAN ENCIRCLED V, ⓥ LEIBNIZIAN ENCIRCLED V IN BOX

The typographical solution of these characters in the edition is bad. In fact the round shape has to be connected with the *v*, similar as in @ (0040). – LAA VII-3 p. 406-407



Investigemus paulo accuratius quot modis fieri possit, ut seriei cui
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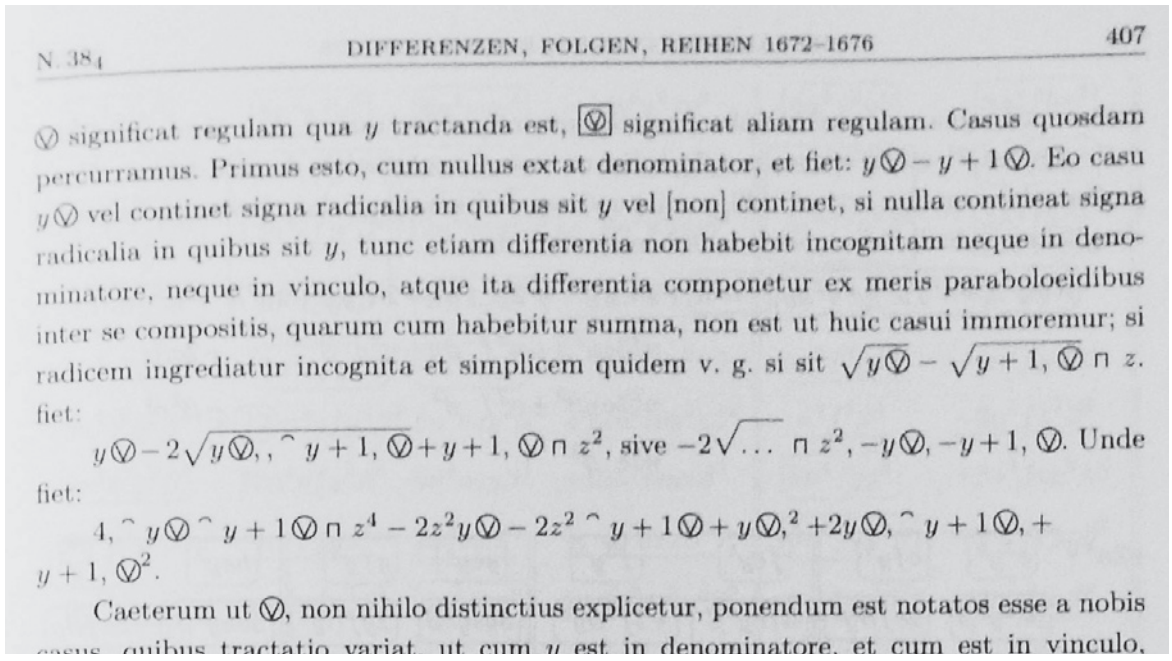
$$\text{Sit: } \frac{y\textcircled{V}}{\boxed{\textcircled{V}}y} - \frac{y+1\textcircled{V}}{y+1\boxed{\textcircled{V}}}, \text{ unde } \frac{y\textcircled{V},\hat{}\,y+1\boxed{\textcircled{V}},,,-,,y\boxed{\textcircled{V}},\hat{}\,y+1\textcircled{V}}{\boxed{\textcircled{V}}y,\hat{}\,y+1\boxed{\textcircled{V}}}.$$



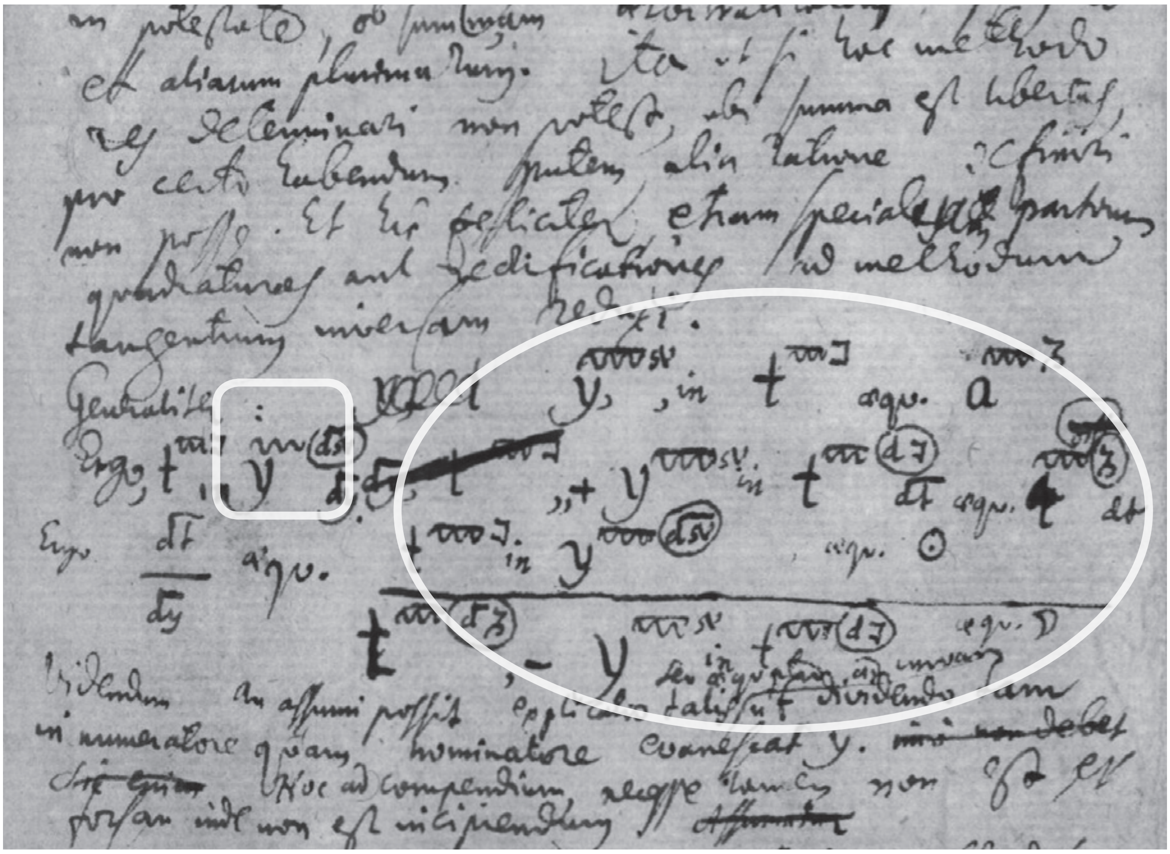
N. 38₄ DIFFERENZEN, FOLGEN, REIHEN 1672–1676 407

Ⓥ significat regulam qua y tractanda est, $\boxed{\textcircled{V}}$ significat aliam regulam. Casus quosdam percurramus. Primus esto, cum nullus extat denominator, et fiet: $y\textcircled{V} - y + 1\textcircled{V}$. Eo casu $y\textcircled{V}$ vel continet signa radicalia in quibus sit y vel [non] continet, si nulla contineat signa radicalia in quibus sit y, tunc etiam differentia non habebit incognitam neque in denominatore, neque in vinculo, atque ita differentia componetur ex meris paraboloeidibus inter se compositis, quarum cum habebitur summa, non est ut huic casui immoremur; si radicem ingrediatur incognita et simplicem quidem v. g. si sit $\sqrt{y\textcircled{V}} - \sqrt{y+1,\textcircled{V}} \sqcap z$. fiet:

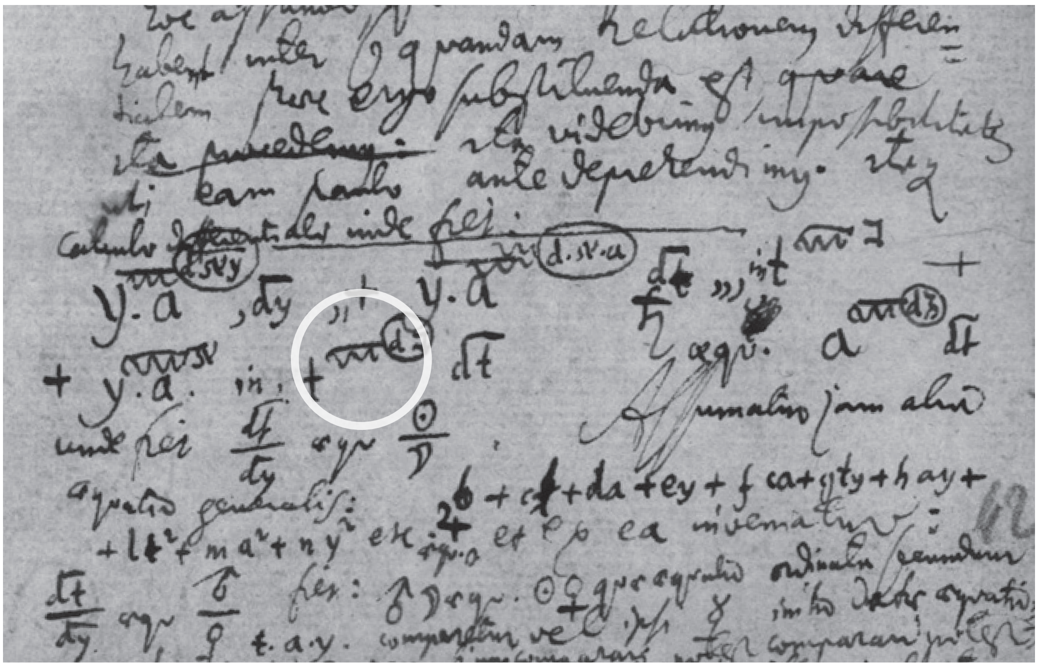
$y\textcircled{V} - 2\sqrt{y\textcircled{V},\hat{}\,y+1,\textcircled{V}} + y + 1,\textcircled{V} \sqcap z^2$, sive $-2\sqrt{\ldots} \sqcap z^2, -y\textcircled{V}, -y+1,\textcircled{V}$. Unde fiet:

$4,\hat{}\,y\textcircled{V}\,\hat{}\,y+1\textcircled{V} \sqcap z^4 - 2z^2 y\textcircled{V} - 2z^2\,\hat{}\,y+1\textcircled{V} + y\textcircled{V},^2 + 2y\textcircled{V},\hat{}\,y+1\textcircled{V},+ y+1,\textcircled{V}^2$.

Caeterum ut Ⓥ, non nihilo distinctius explicetur, ponendum est notatos esse a nobis casus, quibus tractatio variat, ut cum y est in denominatore, et cum est in vinculo,



ᷡ SUPERSCRIPT WAVE SYMBOL , ᷢ SUPERSCRIPT WAVE SYMBOL WITH TOP LINE
LH 35 VII 1, fol. 39r. *The edition of this manuscript is currently in progress*.



ᷢ SUPERSCRIPT WAVE SYMBOL WITH TOP LINE
LH 35 VII 1, fol. 41v. *The edition of this manuscript is currently in progress*.

5. Unicode Character Properties

```
xf01;CASTING-OUT-NINES;Sm;0;ON;;;;;N;;;;;
xf02;LUNATE ENCIRCLED DIGIT ONE;Sm;0;ON;;;;;N;;;;;
xf03;PROPORTION WITH ONE STROKE;Sm;0;ON;;;;;N;;;;;
xf04;PROPORTION WITH TWO STROKES;Sm;0;ON;;;;;N;;;;;
xf05;INFINITY WITH TWO DOTS;Sm;0;ON;;;;;N;;;;;
xf06;INVOLVED;Sm;0;ON;;;;;N;;;;;
xf07;LEIBNIZIAN ENCIRCLED V;Sm;0;ON;;;;;N;;;;;
xf08;LEIBNIZIAN ENCIRCLED V IN BOX;Sm;0;ON;;;;;N;;;;;
xf09;SUPERSCRIPT WAVE SYMBOL;Sm;0;ON;;;;;N;;;;;
xf10;SUPERSCRIPT WAVE WITH OVERLINE SYMBOL;Sm;0;ON;;;;;N;;;;;
```

6. Bibliography

LAA – refers to: Leibniz, Gottfried Wilhelm: Sämtliche Schriften und Briefe. (‘Leibniz-Akademie-Ausgabe’, many volumes)
LH – refers to: Leibniz’s original manuscripts, GWLB Hanover

Bombelli, Rafael: L’Algebra. Bologna 1579
— : L’Algebra. Milan 1966
Cajori, Florian: A history of mathematical notations. Chicago 1928
Probst, Siegmund: Édition des symboles de Leibniz. PDF. Hanover 2023 (presentation Paris 2023)
Rahn, Johann Heinrich: Teutsche Algebra. Zurich 1659
Rinner, Elisabeth: List of glyphs in Leib.mf. PDF. Hanover 2022

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646[1]
Please fill all the sections A, B and C below.
Please read Principles and Procedures Document (P & P) from http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html **for guidelines and details before filling this form.**
Please ensure you are using the latest Form from http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html.
See also http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html **for latest *Roadmaps*.**

A. Administrative

1. **Title:**	**Proposal to encode 21 miscellaneous scientific symbols**
2. Requester's name:	Uwe Mayer, Siegmund Probst, David Rabouin, Elisabeth Rinner, Andreas Stötzner, Achim Trunk, Charlotte Wahl
3. Requester type (Member body/Liaison/Individual contribution):	Individual (work group)
4. Submission date:	2026-01.19.
5. Requester's reference (if applicable):	LUCP L-2604
6. Choose one of the following:	
This is a complete proposal:	Yes
(or) More information will be provided later:	

B. Technical – General

1. Choose one of the following:
   a. This proposal is for a new script (set of characters): No
      Proposed name of script:
   b. The proposal is for addition of character(s) to an existing block: No
      Name of the existing block: [Miscellaneous Symbols Supplement]
2. Number of characters in proposal: 10
3. Proposed category (select one from below - see section 2.2 of P&P document):

A-Contemporary		B.1-Specialized (small collection)	Yes	B.2-Specialized (large collection)	
C-Major extinct		D-Attested extinct		E-Minor extinct	
F-Archaic Hieroglyphic or Ideographic				G-Obscure or questionable usage symbols	

4. Is a repertoire including character names provided? Yes
   a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document? Yes
   b. Are the character shapes attached in a legible form suitable for review? Yes
5. Fonts related:
   a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?
   Andreas Stötzner
   b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):
   Andreas Stötzner Gestaltung, Klauflügelweg 21, 88400 Biberach/R., Germany, as@signographie.de
6. References:
   a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? Yes
   b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? Yes
7. Special encoding issues:
   Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? No

[1] Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? Yes
   If YES explain *see N5336 (L-2536, L-2521), N5277 (L-2402n)*
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)? Yes
   If YES, with whom? Leibniz-Archiv, Forschungsstelle der Leibniz-Edition, Niedersächsische Landesbibliothek (GWLB), Hanover, Göttingen Academy of Science and Humanities in Lower Saxony (DE), Philiumm research group of CNRS (UMR 7219, laboratoire SPHERE) / Université de Paris VII; general: scholars, researchers, authors and editors working in the field of science history and upon editions of historic text corpora (e.g. of G. W. Leibniz, but also many others)
   If YES, available relevant documents: L-2409, L-2410
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Yes
   Reference:
4. The context of use for the proposed characters (type of use; common or rare) Common
   Reference: mainly specialist usage, scholarly, worldwide
5. Are the proposed characters in current use by the user community? Yes
   If YES, where? Reference: mainly Europe, Americas; other countries
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? No
   If YES, is a rationale provided?
   If YES, reference:
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)? No
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? No
   If YES, is a rationale for its inclusion provided?
   If YES, reference:
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? No
   If YES, is a rationale for its inclusion provided?
   If YES, reference:
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character? No
    If YES, is a rationale for its inclusion provided?
    If YES, reference:
11. Does the proposal include use of combining characters and/or use of composite sequences? No
    If YES, is a rationale for such use provided?
    If YES, reference:
    Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? No
    If YES, reference:
12. Does the proposal contain characters with any special properties such as control function or similar semantics? No
    If YES, describe in detail (include attachment if necessary)
13. Does the proposal contain any Ideographic compatibility characters? No
    If YES, are the equivalent corresponding unified ideographic characters identified?
    If YES, reference: