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 mathematical symbols

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Previous version: proposal doc. L-2511 (L2/25-124)
Status: forward to Script Encoding Working Group / WG2
Action: for expert review and encoding pipeline
Date: May 7, 2025
Requester's reference: LUCP L-2515

1. Background
The results of discussion of this proposal (see L2/25-124) on April 29 are reflected in this new version. The changes are:
- one or two unifications with an existing character
- name changes
- some glyph detail adjustments with regard to existing characters

We propose the new characters for the new *Miscellaneous Symbols Supplement* block **1CEC0**.

2. Mathematical-geometrical symbols in historic sources
The symbols proposed here are testified in historic mathematical works by G. W. Leibniz. Leibniz always aimed to achieve a detailed and diversified notation for special problems or concepts. The sets of various "sector" and "angle" symbols represent a certain way of mathematical thinking, therefore the single characters not only bear several unique meanings respectively but they also have a certain meaning *as sets* – as is with many other series of related mathematical symbols.

Originally we proposed these 10 characters:

▽ *SMALL SECTOR*

▽ *SMALL SECTOR WITH CHORD*

▽ *SMALL SECTOR WITH DOUBLE ARC*

▽̈ *SMALL SECTOR TRIANGLE*

⌢ *HYPERBOLA*

∠ *ANGLE-1*

∡ *ANGLE-2*

∠ *ANGLE-3*

∡ *ANGLE-4*

∨ *ANGLE OPENING UP*

3. Angle characters

The previously proposed char. ∠ *ANGLE-1* is dropped and shall be unified with 2221 ∡ MEAS-URED ANGLE. Discussion has revealed that the detail of wether the bow's endings crossing the lines or not, is not essential. In mathematical notation practice and in fonts both forms occur, for example:

∡ *Arial Unicode MS*   ∡ *Brill*   ∡ *Cambria Math*

The remaining three symbols are seen in relation to 2221 and are now proposed as follows:

∡ MEASURED ANGLE WITH DOUBLE ARC

∡ MEASURED ANGLE WITH CONCAVE ARC

∡ MEASURED ANGLE WITH DOUBLE CONCAVE ARC

These symbols also relate in a way to another range of existing angle symbols, encoded at 299B to 29AF. The glyphs of the three new characters may alternatively get the same detailing (crossing bow lines) if that is more suitable with the representative glyph of 2221.

The other angle symbol:

∨ ANGLE OPENING UP

corresponds to 29A1 SPHERICAL ANGLE OPENING UP. Despite its similar shape it ought not to be unfied with 2228 LOGICAL OR because in publications a distinction between the *logical* expression and a *geometry*-related angle symbol needs to be maintained. The glyphs representing the logical operators (2227–222A) are smaller and wider, in proportion similar to e.g. the + or = symbols; whereas the default basic shape of the angle symbols is larger and more slim.

4. Sector characters

The proposed sector symbols have been discussed in relation to 2314 ◇ SECTOR. We concluded that an acute angle of the new symbols is not mandatory, it may well be right angles, as in 2314. Therefore the previous ▽ *SMALL SECTOR* is going to be unified with 2314 ◇ SECTOR. For that character it would be favourable to make a minor glyph change in the code chart, it should be a little larger (similar to the form it had in Unicode 1.0) and thus match the width of 2312 and 2313. Together with 2314 the three new proposed characters would form a consistent set:

2314   ▽   SECTOR

        ▽   SECTOR WITH CHORD

        ▽   SECTOR WITH DOUBLE ARC

        ▽   SECTOR WITH CHORD AND DOTTED ARC

If the UTC would conclude *not* to enlarge the glyph of 2314, we would prefer to keep the four proposed sector symbols in the form with acute angles (which is visually closer to manuscript evidence) as follows; 2314 and the *acute sector* would *not* be unified:

        ▽   ACUTE SECTOR

        ▽   ACUTE SECTOR WITH CHORD

        ▽   ACUTE SECTOR WITH DOUBLE ARC

        ▽   ACUTE SECTOR WITH CHORD AND DOTTED ARC

(2314   ◇   SECTOR)

5. Summary

We propose these new characters for inclusion in the new *Miscellaneous Symbols Supplement* block **1CEC0**:

1CEF6   ▽   SECTOR WITH CHORD

1CEF7   ▽   SECTOR WITH DOUBLE ARC

1CEF8   ▽   SECTOR WITH CHORD AND DOTTED ARC

1CEF9   ◿   MEASURED ANGLE WITH DOUBLE ARC

1CEFA   ∡   MEASURED ANGLE WITH CONCAVE ARC

1CEFB   ◿   MEASURED ANGLE WITH DOUBLE CONCAVE ARC

1CEFC   ∨   ANGLE OPENING UP

1CEFD   ∧   HYPERBOLA

	1CEC	1CED	1CEE	1CEF
0	1CEC0	1CED0	1CEE0	1CEF0
1	1CEC1	1CED1	1CEE1	⌣ 1CEF1
2	1CEC2	1CED2	1CEE2	⌢ 1CEF2
3	1CEC3	1CED3	1CEE3	1CEF3
4	1CEC4	1CED4	1CEE4	1CEF4
5	1CEC5	1CED5	1CEE5	1CEF5
6	1CEC6	1CED6	1CEE6	1CEF6
7	1CEC7	1CED7	1CEE7	1CEF7
8	1CEC8	1CED8	1CEE8	1CEF8
9	1CEC9	1CED9	1CEE9	1CEF9
A	1CECA	1CEDA	1CEEA	1CEFA
B	1CECB	1CEDB	1CEEB	1CEFB
C	1CECC	1CEDC	1CEEC	1CEFC
D	1CECD	1CEDD	1CEED	1CEFD
E	1CECE	1CEDE	1CEEE	1CEFE
F	1CECF	1CEDF	1CEEF	1CEFF

see doc. L2/25-062
(L-2503)

5. Unicode Character Properties

```
1CEF6;SECTOR WITH CHORD;Sm;0;ON;;;;;N;;;;;
1CEF7;SECTOR WITH DOUBLE ARC;Sm;0;ON;;;;;N;;;;;
1CEF8;SECTOR WITH CHORD AND DOTTED ARC;Sm;0;ON;;;;;N;;;;;
1CEF9;MEASURED ANGLE WITH DOUBLE ARC;Sm;0;ON;;;;;N;;;;;
1CEFA;MEASURED ANGLE WITH CONCAVE ARC;Sm;0;ON;;;;;N;;;;;
1CEFB;MEASURED ANGLE WITH DOUBLE CONCAVE ARC;Sm;0;ON;;;;;N;;;;;
1CEFC;ANGLE OPENING UP;Sm;0;ON;;;;;N;;;;;
1CEFD;HYPERBOLA;Sm;0;ON;;;;;N;;;;;
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5. 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
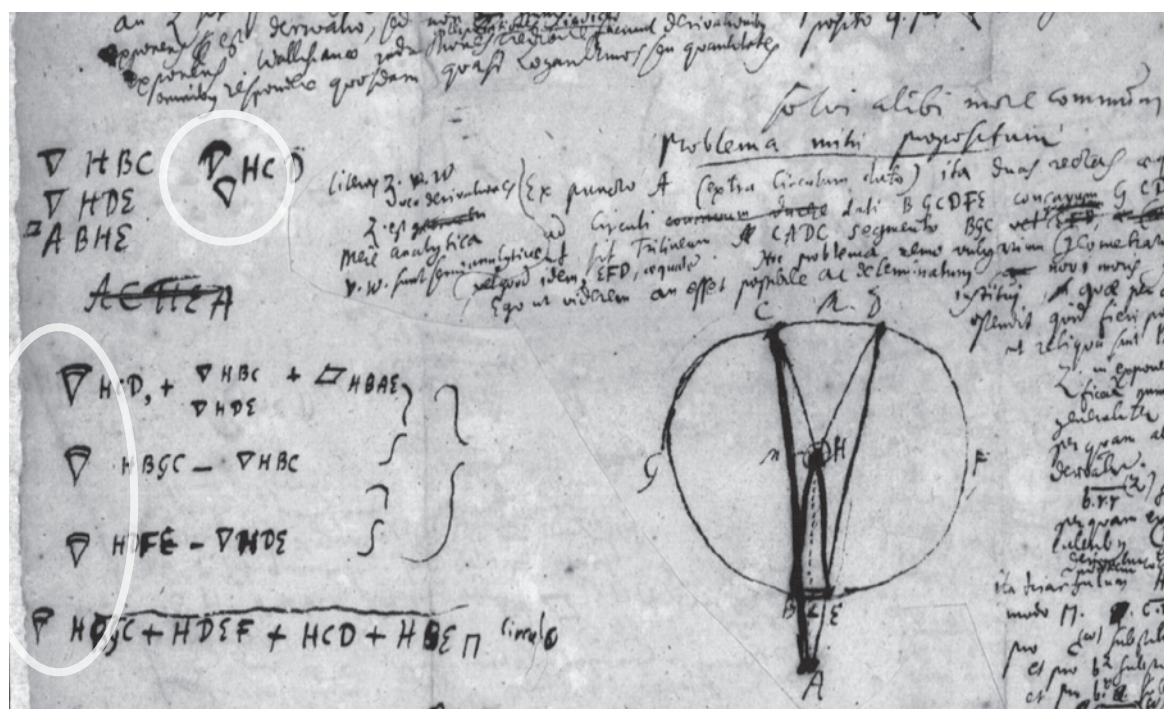Rinner, Elisabeth: List of glyphs in Leib.mf. PDF, Hanover 2022

☞   Leibniz-Akademie-Ausgabe (LAA, general edition of Leibniz's writings)

online   LAA series VII (mathematical manuscripts, volumes 3 to 7 available online)

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6. Figures and explanations

◇ SECTOR WITH DOUBLE ARC
LH 35 I 14 fol. 88v. *The edition of this manuscript is currently in progress.*

6. Figures and explanations

videmur obtinuisse, ut hoc pacto quadratura circuli devenerit problema solidum solubile, et construi possit, quemadmodum problemata solida omnia. Sed in eo malum est, quod una tantum est cognita a^2. Si quaedam b. aequationem ingrederetur, tunc solvi posset problema ope parabolae, deberet nimirum fieri aequatio talis posito $y = x$.

15
$$y^2 = ax - b^2. \quad \text{vel} \quad x^2 = [ay] - b^2.$$

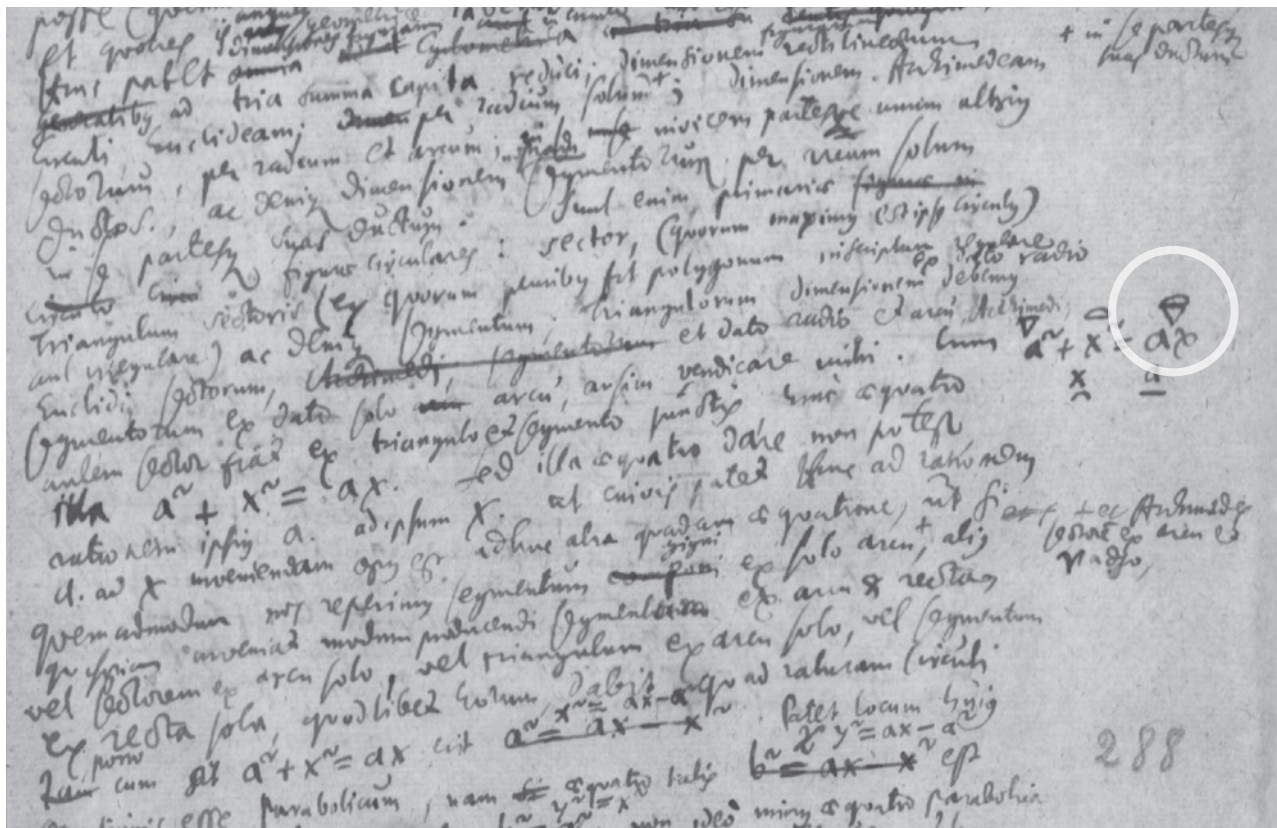haberemus solutionem saltem per parabolam, seu locum solidum. Quare si quis exhibere posset segmentum circuli aequale cuidam sectori cuius arcus est radix segmenti demto quodam quadrato cuius radix est alia a radio. Sed his non opus, sufficit prior illa aequatio:

$$\frac{x^2}{\alpha} = \frac{bx}{\beta} - b^2.$$

_____
1

▽ SECTOR WITH CHORD – LAA VII-4 p. 192
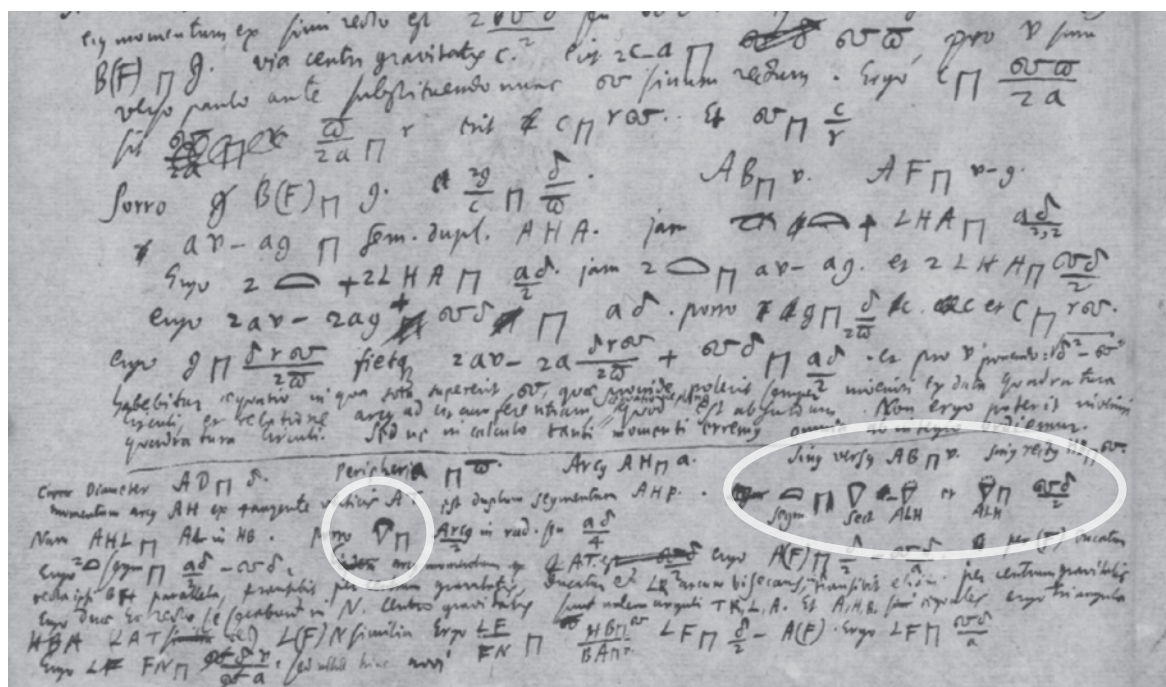

▽ SECTOR WITH CHORD
The corresponding Ms.: LH 35 II 1, fol. 287v

gravitatis c. erit $2ca \sqcap \infty\pi$, pro v sinu verso paulo ante substituendo nunc ∞ sinum rectum. Ergo $c \sqcap \dfrac{\infty\pi}{2a}$. Sit $\dfrac{\pi}{2a} \sqcap r$ erit $c \sqcap r\infty$. Et $\infty \sqcap \dfrac{c}{r}$. Porro $B(F) \sqcap g$. et $\dfrac{2g}{c} \sqcap \dfrac{\delta}{\pi}$.

$AB \sqcap v$. $A(F) \sqcap v - g$. $av - ag \sqcap \text{se[g]m. dupl. } AHA$. Jam $\frown + LHA \sqcap \dfrac{a\delta}{2,2}$. Ergo

$2\frown + 2LHA \sqcap \dfrac{a\delta}{2}$. Jam $2\frown \sqcap av - ag$. et $2LHA \sqcap \dfrac{\infty\delta}{2}$ ergo $2av - 2ag + \infty\delta \sqcap a\delta$. Porro

$g \sqcap \dfrac{\delta}{2\pi}c$. et $c \sqcap r\infty$. Ergo $g \sqcap \dfrac{\delta r\infty}{2\pi}$ fietque $2av - 2a\dfrac{\delta r\infty}{2\pi} + \infty\delta \sqcap \dfrac{a\delta}{2}$. et pro v ponendo:

$\sqrt{\delta^2 - \infty^2}$ habebitur aequatio in qua sola supererit ∞, quae proinde poterit semper inveniri ex data Quadratura Circuli, et relatione arcus ad circumferentiam, aequatione plana quod est absurdum. Non ergo poterit inveniri quadratura circuli. Sed ne in calculo tanti momenti erremus omnia ab integro ordiemur.

Diameter $AD \sqcap \delta$. Peripheria $\sqcap \pi$. Arcus $AH \sqcap a$. Sinus versus $AB \sqcap v$. Sinus rectus $HB \sqcap \infty$. Momentum arcus AH ex tangente verticis AT est duplum segmentum

AHR. $\frown \sqcap \bigtriangledown - \bigtriangledown\!\!\!\cdots$ et $\bigtriangledown\!\!\!\cdots \sqcap \dfrac{\infty\delta}{2}$. Nam $AHL \sqcap AL$ in HB. Porro $\bigtriangledown \sqcap \dfrac{\text{Arcus}}{2}$

Segm.   Sect. ALH ALH

in rad. seu $\dfrac{a\delta}{4}$. Ergo $2\frown$ segm. $\sqcap \dfrac{a\delta}{2} - \infty\delta$, arcus momentum ex AT. Ergo $A(F) \sqcap \dfrac{\delta}{2} -$
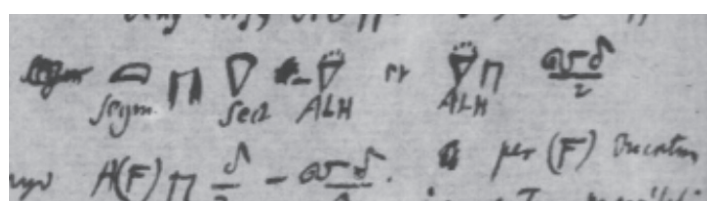
$\ominus$ SECTOR WITH CHORD AND DOTTED ARC – LAA VII-5 p. 555

(2314 SECTOR) and $\ominus$ SECTOR
WITH CHORD AND DOTTED
ARC,
Corresponding Ms.:
LH 35 VI 5, fol.11v

Mercatoris per divisionem; quia, ita series qualescunque propositae etiam irregulares satis

nec ordine procedentes, ad figuram convenientem, revocantur, qualis ista est: $\dfrac{b}{1} - \dfrac{b^3}{3} + \dfrac{b^2}{2}$

5   etc. Variae aliae coniunctiones institui possunt, ut ista:

$$\overbrace{\dfrac{1}{1} - \dfrac{1}{2} + \dfrac{1}{3} - \dfrac{1}{4}} + \overbrace{\dfrac{1}{5} - \dfrac{1}{6} + \dfrac{1}{7} - \dfrac{1}{8}} + \overbrace{\dfrac{1}{9} - \dfrac{1}{10} + \dfrac{1}{11} - \dfrac{1}{12}} \ [\text{etc.}]$$

$$\dfrac{3}{4} - \dfrac{1}{6} + \dfrac{3}{40} - \dfrac{1}{42} + \dfrac{3}{108} - \dfrac{1}{110} \ \text{etc.}$$

Et ita semper novae erui possunt figurae. Sumtis seriebus fractionum quadraticarum
unitate deminutarum:

10    $$\dfrac{1}{3} + \dfrac{1}{8} + \dfrac{1}{15} + \dfrac{1}{24} + \dfrac{1}{35} + \dfrac{1}{48} + \dfrac{1}{63} + \dfrac{1}{80} + \dfrac{1}{99} + \dfrac{1}{120} + \dfrac{1}{143} + \dfrac{1}{168} + \dfrac{1}{195} + \dfrac{1}{224} \ [\text{etc.}]$$

$\cdot \quad \square \quad \cdot \quad \square \quad \cdot \quad \square \quad \cdot \quad \square \quad \cdot \quad \square \quad \cdot \quad \square \quad \cdot \quad \square$

$\circ \qquad\qquad \circ \qquad\qquad \circ \qquad\qquad \circ$

$\frown \qquad\qquad \frown \qquad\qquad \frown \qquad\qquad \frown$

$\infty \qquad\qquad \infty \qquad\qquad \infty$

15    $\propto \qquad\qquad \propto \qquad\qquad \propto$

Omnium terminorum punctatorum habetur summa; item omnium terminorum $\square$
notatorum; ac proinde et totius seriei; sed termini circulo notati pendent ex quad. circuli,
termini $\frown$ notati ex quad. hyperb.

Sed quid termini $\dfrac{1}{3} \quad \dfrac{1}{24} \quad \dfrac{1}{63} \quad \dfrac{1}{120}$ [etc.], sane sunt: $\dfrac{1}{1 \frown 3} \quad \dfrac{1}{4 \frown 6 \sqcap 3 \frown 8} \quad \dfrac{1}{7 \frown 9}$

20    $\dfrac{1}{10 \frown 12}$ [etc.]

$\frown$ HYPERBOLA
LAA VII-3 p. 386
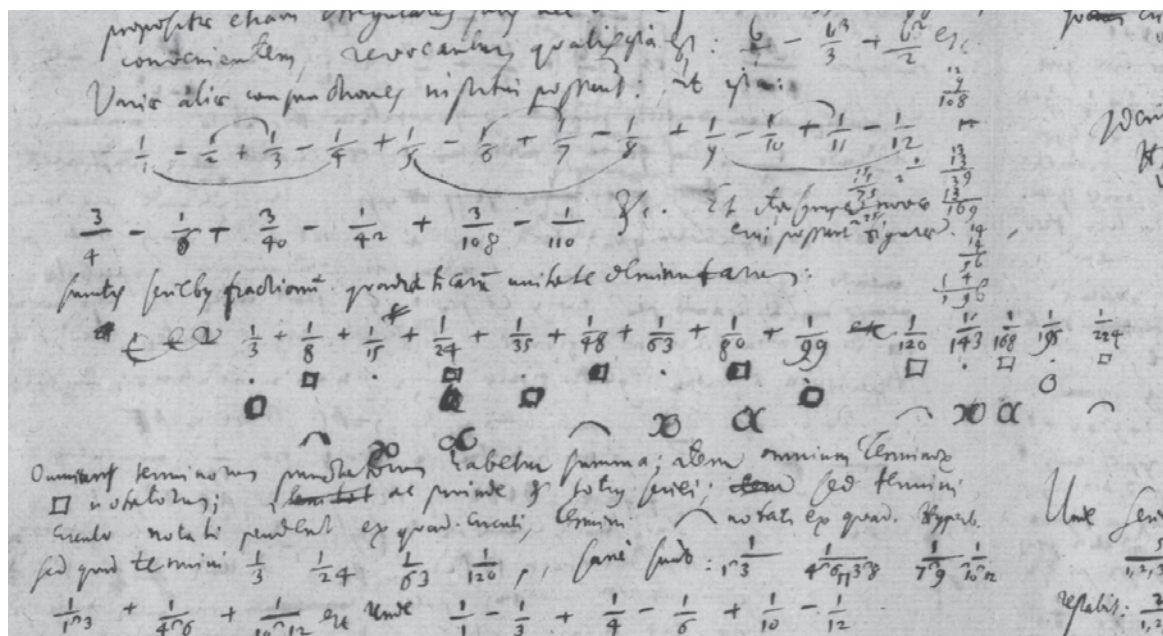
The corresponding Ms.: LH 35 V 4 fol. 2v

Quoniam autem series

$$\frac{1}{3} \quad \frac{1}{15} \quad \frac{1}{35} \quad \frac{1}{63} \quad \frac{1}{99} \quad \frac{1}{143}$$ etc. a me inventa est; et series

$$\frac{1}{3} \qquad \frac{1}{35} \qquad \frac{1}{99}$$ etc. pendet ex quadratura circuli, itaque series

$$\frac{1}{15} \qquad \frac{1}{63} \qquad \frac{1}{143}$$ [etc.] etiam pendebit ex quadratura circuli.

$$\frac{1}{3} \qquad \frac{1}{35} \qquad \frac{1}{99}$$ [etc.] resoluta dant:

$$\frac{1}{1 \,\widehat{\ } \, 3} \qquad \frac{1}{5 \,\widehat{\ } \, 7} \qquad \frac{1}{9 \,\widehat{\ } \, 11}$$ etc., cuius seriei origo est

$$\frac{b}{1} - \frac{b^3}{3} + \frac{b^5}{5} - \frac{b^7}{7} + \frac{b^9}{9} - \frac{b^{11}}{11}$$ etc. facta ex summis omnium:

$$1 - y^2 + y^4 - y^6 + y^8 - y^{10}$$ etc.

Idem plane evenit, examinatis duabus alteris ad hyperbolam seriebus, $\propto$ et $\wedge$; ut non sit opus immorari. Videamus quid fiat, ademtis:

3 f. $\dfrac{y^2}{1 + y^2}$. *(1)* Eodem modo sumatur series, alia per saltus tertianos, quam ita notavi $\propto$. $\dfrac{1}{3} \quad \dfrac{1}{35}$

$\dfrac{1}{99}$ *(2)* Quoniam autem *(a)* constat seriem *(3)* series *L*   7–389,6 etc. *erg. Hrsg. fünfmal*   7 f. circuli.

(1) Miror autem eandem ex una quam ex altera serie prodire figuram. Nam *(2)* $\frac{1}{2}$ *L*   9 etc., *(1)* unde

$\wedge$ HYPERBOLA
LAA VII-3 p. 388

The corresponding Ms.: LH 35 V 4 fol. 3r

13 Zu Fig. 3: Nach Aussage (4) soll *D* ein beliebiger Punkt auf dem Quadranten *AO* sein. Leibniz hat in seiner Handzeichnung den Bogen *AD* jedoch gleich 60° gewählt, wodurch die Allgemeinheit verloren gegangen ist. Leibniz hat dies, wie die Zusätze neben der Figur zeigen, später bemerkt. Er hat aber keine neue Zeichnung angefertigt, sondern hat sich damit begnügt, den allgemeinen Fall mittels Einzeichnen der Linie *B✿φ*, der Verlagerung der Linie *Aβα* sowie vieler zusätzlicher Winkelmarkierungen darzustellen. Hierbei bedeuten ∡ = 25°; ∢ = 50°; ∠ = 65° und ∡ = 40°. — Die Handzeichnung ist bis auf einige wenige Winkelangaben korrekt.   14 *AN*: s. dazu N. 29 S. 523 Z. 22 – S. 524 Z. 8 .
15 modo: Eine ähnlich unbestimmte Haltung bezüglich der Existenz des Höhenschnittpunkts im Dreieck nimmt Leibniz *LSB* VII, 1 N. 2 S. 4 ein.

(2221 ∡ MEASURED ANGLE), ∢ MEASURED ANGLE WITH DOUBLE ARC, ∠ MEASURED ANGLE WITH CONCAVE ARC, ∡ MEASURED ANGLE WITH DOUBLE CONCAVE ARC – LAA VII-4 p. 409

$$\left.\begin{array}{c} 90 \\ 25 \\ 50 \end{array}\right\} \text{Ang.}$$

$90 - 25 = 65 = 25 + 40$	65	
$90 - 50 = 40$	65	
$65 + 40 = 105$	50	
$180 - 105 = 75$	$\overline{180}$	

NB. recta *DB* continuata non cadit in ϖ punctum medium rectae *CF* nisi ∠ sit = ∢ nam angulus *EF*ϖ est ∠ ob ▽*CEF*. et idem foret ∢ ob ▽*D*ϖ*F*.

[Teil 2]

Determinatio punctorum, sive quantitas linearum in fig. 3.

∢ MEASURED ANGLE WITH DOUBLE ARC, ∠ MEASURED ANGLE WITH CONCAVE ARC – LAA VII-4 p. 410

Corresponding Ms.: LH 35 II 1, fol. 143r

10

In circulo AB ducta applicata seu sinu CD iunctisque chordis AD, DB erit $\triangledown^{\text{lo}}$ ADB simile ADC. quia $\vee ACD = \vee ADB$. rectus recto et $\vee DAB = \vee DAC$. ergo $\vee ADC = \vee DBA$. Eodem modo $\triangledown^{\text{lum}}$ DCB simile utrique.

Ergo $\dfrac{AB}{AD} = \dfrac{AD}{AC}$. Ergo $AB \frown AC = AD \frown AD$. seu rectangulum sub diametro et sinu verso aequatur quadrato chordae.

$\vee$ ANGLE OPENING UP
LAA VII-4 p. 377

Si dividantur omnia per ab vel a est genus quoddam solidi hyperboloeiformis, quod quadrari potest.

Erit $\dfrac{a-1}{a-1}\ \dfrac{4a-4}{a-2}\ \dfrac{9a-9}{a-3} = a+a+a$ etc. summa a^2. Ecce planum hyperboliforme quadrabile.

Ergo ista rectangula ita crescent: $\dfrac{b^2a}{a-b} = a^2\quad \dfrac{2b^2a}{a-2b} = a^2\quad \dfrac{3b^2a}{a-3b}$ etc. Unde   5
apparet solidum istud ex rectangulis factum aequari momento hyperbolico seu ungulae.
Videndum exactius.

[*Teil 2*]

In $\triangledown^{\text{lo}}$ ADL radius AL in sinum $CD = AD$ sin. dimidii duplicatum, seu chordam arcus dati in LM sinum complementi arcus dimidii.   10

$\vee TUD = LDB$. Ergo UDT et ADL ($\vee^{\text{li}}$) aequales, ergo $\triangledown^{\text{la}}$ UTD et ADK similia, item LMD, item HDL. MTW ang. $= LDB$. ang. $TMW = ADL$.
$\triangledown DML = \triangledown MTW$.

Ang. ADC dimid. ang. ALE (alter ad centrum, alter ad circumferentiam, super eodem arcu AE). Ergo et HDI $\vee$ duplus ADC (quia $HD = DI$ et $HM = MI$) $= ALD$.   15
qui est $= ALE$. quia AD arcus $= AE$.

$\vee^{\text{lus}}$ HID (vel DHI) $= \vee^{\text{lo}}$ HLS. supplenti dimidii anguli dati ALD nempe ALH ad quadrantem.

Ang. ADB rect. $= AGD$ rect. $\vee ADC = CBD$. $AG = AC$. $DC = GD$. $AH = HD$. et quia $AK = GD$. ergo $GH = IK = IC$. Porro $\vee CIK = \vee AHD$. item $\vee CIK = AID$.   20
ergo $\vee AHD = \vee AID$. Ergo et dimidii aequales seu $\vee HID = \vee IHD$.

1 per *(1)* a^2b *(2)* ab vel a L 4 f. quadrabile. *(1)* Incipiatur inverso modo $\dfrac{\text{sinus versus b} \frown \text{chorda Rq ba}}{\text{sinus versus supplementi a}-b}$ $\frown$ *(a)* b^2 *(b)* chorda $= \dfrac{b^2a}{a-b} = a^2$ *(2)* $\dfrac{2b^2a}{a-2b}$ *(3)* Ergo L
21–386,1 $\vee$IHD. *(1)* Ergo $\triangledown^{\text{lum}}$ HDI est aequiangulum, ac proinde et aequilaterum ergo HI (FD) $=$ HD $=$ AH. *(2)* Idemque L

$\vee$ ANGLE OPENING UP
LAA VII-4 p. 385

LH 35 II 1, fol. 268v

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 mathematic 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: 2025-05.07.
5. Requester's reference (if applicable): LUCP L-2515
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:
2. Number of characters in proposal: 8
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

8. Additional Information:
Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at http://www.unicode.org for such information on other scripts. Also see Unicode Character Database (http://www.unicode.org/reports/tr44/) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	Yes
If YES explain	*previous version: see L2/25-124*

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)? **Yes**

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: