

Proposal for Emoji: EQUAL SIGN

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1. Identification

- a. **CLDR Short name:** EQUAL SIGN
- b. **CLDR keywords:** equals sign, equality, equals, equal rights, even, mathematics

2. Images



Image Credit: Anna Zeng. Free to use in conjunction with this proposal.

3. Sort Order: In the OTHER-SYMBOL category, after DIVISION SIGN

4. Reference Emoji: ELEPHANT

This proposal was updated 12.11.19 to include an image for NOT EQUALS, stats for NOT EQUALS, and a screenshot of preexisting math emoji.

Abstract

This proposal requests the addition of the EQUAL SIGN emoji to the Unicode Library. As the cornerstone of mathematical operations--no equation is complete without this symbol revealing the answer--the EQUAL SIGN has long served a crucial role in all forms of arithmetic. The ubiquity of the EQUAL SIGN has also led to its use by organizations fighting for *equal* rights--those who advocate that all people are created *equal*, regardless of race, religion, sex, gender, sexuality, gender expression, or class. As the other “big four” mathematical emoji (addition, subtraction, multiplication, and division) signs exist, the EQUAL SIGN deserves a place among them--for none are EQUAL to it!

Introduction

“Physics depends on a universe infinitely centred on an equals sign.”--Mark Z. Danielewski¹

The equal sign! That simplest of symbols--nothing more than two horizontal lines with a space between them--that nevertheless is the most important in all of mathematics; regardless of the complexity of the arithmetic or the scope of the equation, every operation requires an equal sign to denote “the solution is equivalent to this.” As such, mathematicians, physicists, and scientists of all kinds have used the humble equal sign in all of their greatest work. In a more metaphorical sense, the immediate recognition of the equal sign has led to its usage by those fighting for *equal* rights around the world--by simply stating that oppressed groups are equal to those in power, entire lives have been changed. And through it all, the equal sign sits plain and unassuming, telling the world, quite simply, that one thing is equivalent to another. What could be more powerful than that?

The equal sign, as we know it today, was first recorded nearly six hundred years ago, when Robert Recorde, a Welsh physician and mathematician, used the symbol to state the simple rules of algebra.² In his *Whetstone of Witte*, Recorde writes that “to avoid the tedious repetition of these words--*is equal to*--I will set, as I often do in work use, a pair of parallels, or *Gemowe lines*, of one length...because no 2 things, can be more equal.”³ This was not immediately a popular choice--others used two *vertical* lines, or the symbol æ, from the Latin *aequalis*, or “equal”--but over time, Recorde’s concept became the universal standard.⁴

1

<https://quotefancy.com/quote/1155375/Mark-Z-Danielewski-Physics-depends-on-a-universe-infinitely-centred-on-an-equals-sign>

² https://en.wikipedia.org/wiki/Robert_Recorde

³ <https://archive.org/stream/TheWhetstoneOfWitte#page/n237/mode/2up>

⁴ https://en.wikipedia.org/wiki/Equals_sign#History

The Arte

as their woꝝkes doe extende) to distincte it onely into two partes. Whercof the firſte is, when one number is equalle vnto one other. And the ſeconde is, when one number is compared as equalle vnto .2. other numbers.

Alwaies willyng you to remēber, that you reduce your numbers , to their leaſte denominations , and ſmalleſte foꝝmes, befoꝝe you procede any farther.

And again, if your equation be ſoche, that the greateſte denomination Coſſike, be ioined to any parte of a compoūde number , you ſhall tourne it ſo , that the number of the greateſte ſigne alone , maie ſtande as equalle to the reſte.

And this is all that needeth to be taughte , concernyng this woꝝke.

Howbeit, foꝝ eaſie alteration of equations. I will propoūde a fewe exāples, bicauſe the extraction of their rootes, maie the moꝝe aptly bee wroughte. And to auoide the tedious repetition of theſe woꝝdes : is equalle to : I will ſette as I doe often in woꝝke beſe, a paire of paraleles, oꝝ ſeuerall lines of one lengthe, thus: =====, bicauſe noe .2. thynges, can be moꝝe equalle. And now marke theſe numbers,

1. 14.ze.—|—15.ſ=====71.ſ.
2. 20.ze.——.18.ſ=====102.ſ.
3. 26.ſ.—|—10ze=====9.ſ——10ze——|—213.ſ.
4. 19.ze——|—192.ſ=====10ſ.—|—108ſ——19ze
5. 18.ze——|—24.ſ=====8.ſ.—|—2.ze.
6. 34ſ——12ze=====40ze——|—480ſ——9.ſ
1. In the firſte there appeareth, 2. numbers , that is
14.ze.

The page from Robert Recorde's *Whetstone of Witte* that contains the first-ever usage of the equal sign as we know it today.⁵

⁵ <https://archive.org/stream/TheWhetstoneOfWitte#page/n237/mode/2up>

Over time, the equal sign was adopted not only by mathematicians, but computer programmers as well. FORTRAN I, one of the earliest programming languages, used the sign as an *assignment statement*, or function which “sets and resets the value stored in the storage location”—in other words, “X=2” means that, whenever X appears in the program, it will be understood as the value of 2.⁶ This seemingly simple function plays a crucial role in programming, just as Recorde’s original *Gemowe lines* helped to shape the future of mathematics.

In a more metaphorical sense, the equal sign has, in recent years, become one of the universal symbols not just for mathematical equality, but equality in the eyes of the law and society as well. The campaign for “equal rights”—that is, fair and just treatment for all people regardless of their sex, race, sexual orientation, gender, class, country of origin, gender expression, or birth circumstances—still uses Recorde’s concept of the *Gemowe lines* to capture the very core of their arguments. For example, the Human Rights Campaign—the largest “largest LGBTQ advocacy group and political lobbying organization in the United States”⁷—uses a large yellow version of the equal sign as its logo, signifying its commitment to both marriage equality (the right for same-sex couples to legally wed their partners) and general drive for equal rights across the country. In a particularly famous incident, the HRC actively campaigned for Facebook users across the world to change their profile pictures to a red-and-pink version of their logo in support of marriage equality during March 2013, when the United States Supreme Court heard arguments for the law.⁸ The historic campaign, which saw millions change their photo, was ultimately a success, and speaks to the still-important presence of the equal sign in today’s society. The equal sign may be small, but its role in mathematics, programming, and the fight for human rights is truly gargantuan and unmatched!



The famous “Red and Pink” Equal Sign, designed by Stone Yamashita of the Human Rights Campaign, used in 2013 to denote support for Marriage Equality on Facebook.⁹

⁶ [https://en.wikipedia.org/wiki/Assignment_\(computer_science\)](https://en.wikipedia.org/wiki/Assignment_(computer_science))

⁷ https://en.wikipedia.org/wiki/Human_Rights_Campaign

⁸ <https://www.hrc.org/hrc-story/about-our-logo>

⁹ <https://www.hrc.org/hrc-story/about-our-logo>

Selection Factors – Inclusion

Compatibility

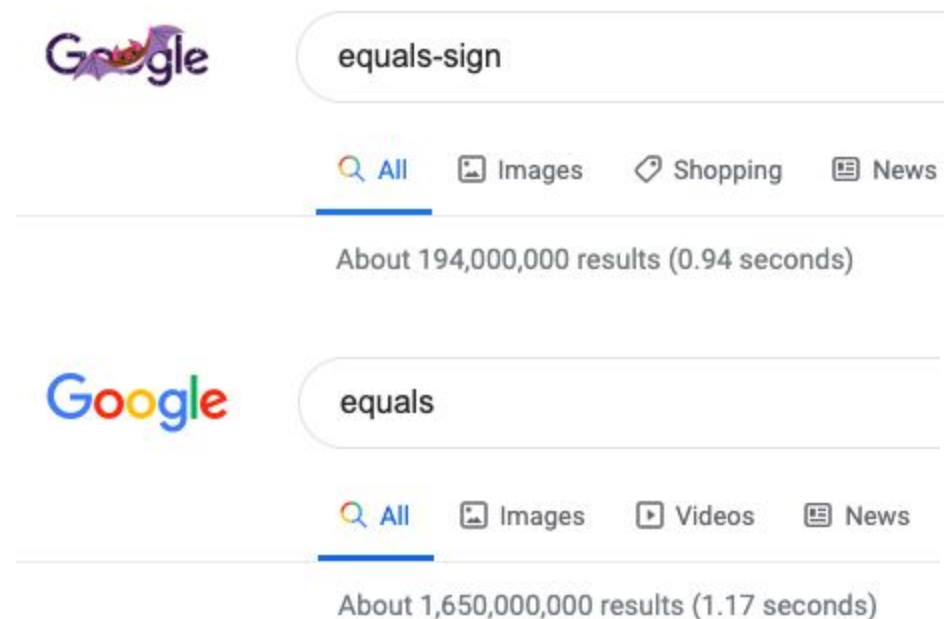
Not applicable.

Expected Usage Level

Frequency

We included frequency searches for "equals" and "equality" as well as "equals sign", because we believe those are the keywords users will use.

Google Web Search



The image displays two screenshots of Google search results. The top screenshot shows a search for "equals-sign" with approximately 194,000,000 results in 0.94 seconds. The bottom screenshot shows a search for "equals" with approximately 1,650,000,000 results in 1.17 seconds. Both screenshots include the Google logo, a search bar with the query, and navigation links for All, Images, Shopping, and News.

Search Query	Approximate Results	Search Time (seconds)
equals-sign	194,000,000	0.94
equals	1,650,000,000	1.17



equality

[All](#) [Images](#) [News](#) [Books](#)

About 237,000,000 results (0.92 seconds)



not-equals

[All](#) [Images](#) [Shopping](#) [News](#)

About 168,000,000 results (0.79 seconds)



elephant

[All](#) [Images](#) [News](#) [Videos](#)

About 749,000,000 results (1.13 seconds)

Google Video Search



equals-sign

[All](#) [Images](#) [Shopping](#) [News](#) [Videos](#)

About 3,410,000 results (0.42 seconds)



equals

[All](#) [Images](#) [Videos](#) [News](#)

About 83,000,000 results (0.40 seconds)



equality

[All](#) [Images](#) [News](#) [Books](#) [Videos](#) [More](#)

About 14,100,000 results (0.39 seconds)



not-equals

[All](#) [Images](#) [Shopping](#) [News](#) [Videos](#) [More](#)

About 9,230,000 results (0.38 seconds)



elephant

[All](#) [Images](#) [News](#) [Videos](#)

About 131,000,000 results (0.29 seconds)

Bing Search



equals-sign

[All](#) [News](#) [Images](#) [Videos](#)

2,120,000 Results [Any time](#) ▾



equals

[All](#) [News](#) [Images](#) [Videos](#)

105,000,000 Results [Any time](#) ▾



equality

All

News

Images

Videos

105,000,000 Results

Any time ▾



not equals

All

Images

Videos

Maps

7-20 Of 120,000,000 Results

Any time ▾



elephant

All

Images

Videos

Maps

125,000,000 Results

Any time ▾

Google Trends: Web Search

● equals sign
Search term

● equals
Search term

● elephant
Search term

+ Add comparison

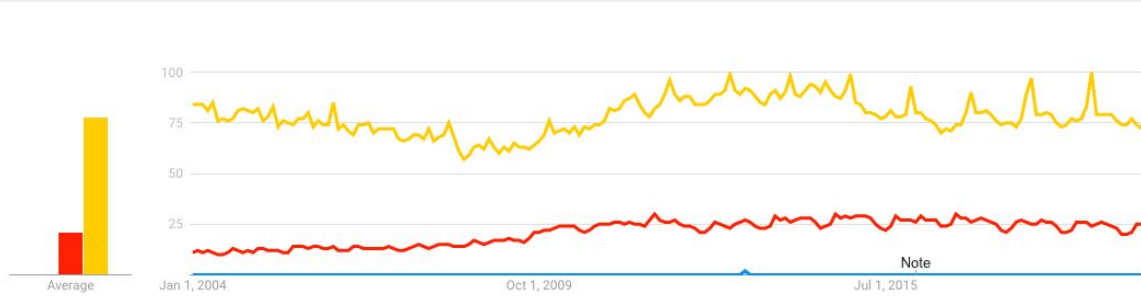
Worldwide ▾

2004 - present ▾

All categories ▾

Web Search ▾

Interest over time ⓘ



● equality
Search term

● not equals
Search term

● elephant
Search term

+ Add comparison

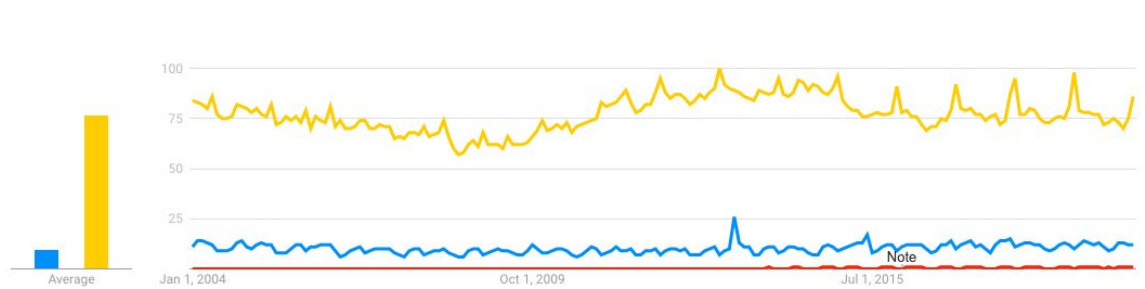
Worldwide ▾

2004 - present ▾

All categories ▾

Web Search ▾

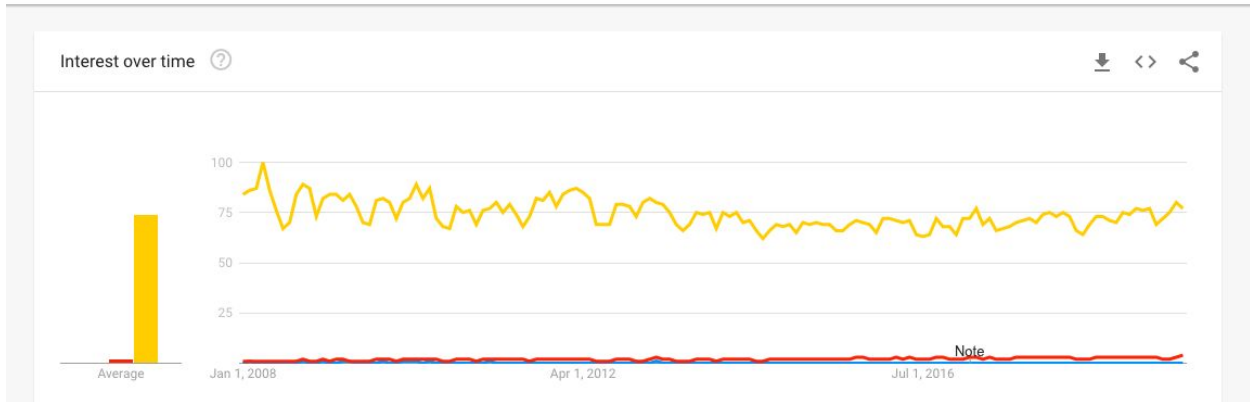
Interest over time ⓘ



Google Trends: Image Search

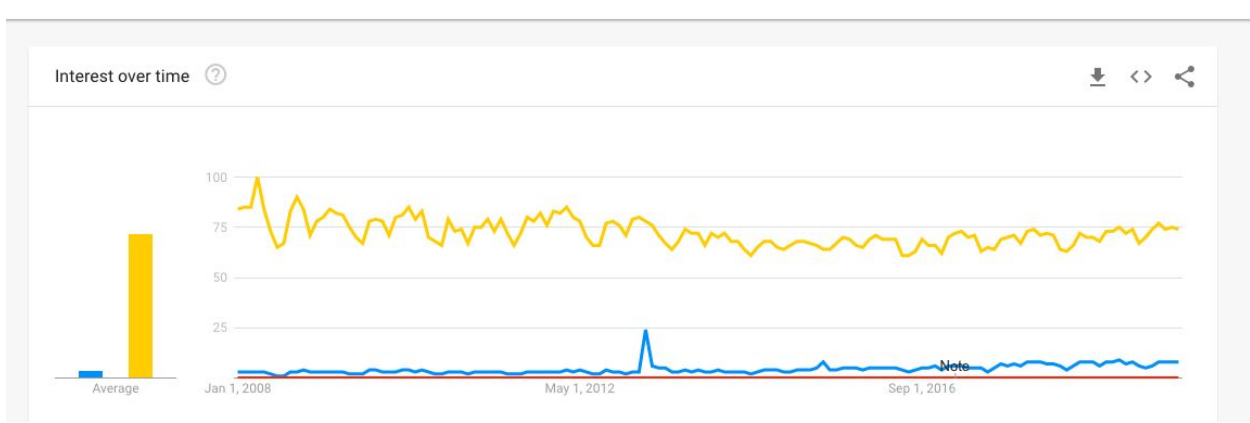
● equals sign Search term ● equals Search term ● elephant Search term + Add comparison

Worldwide ▾ 2008 - present ▾ All categories ▾ Image Search ▾



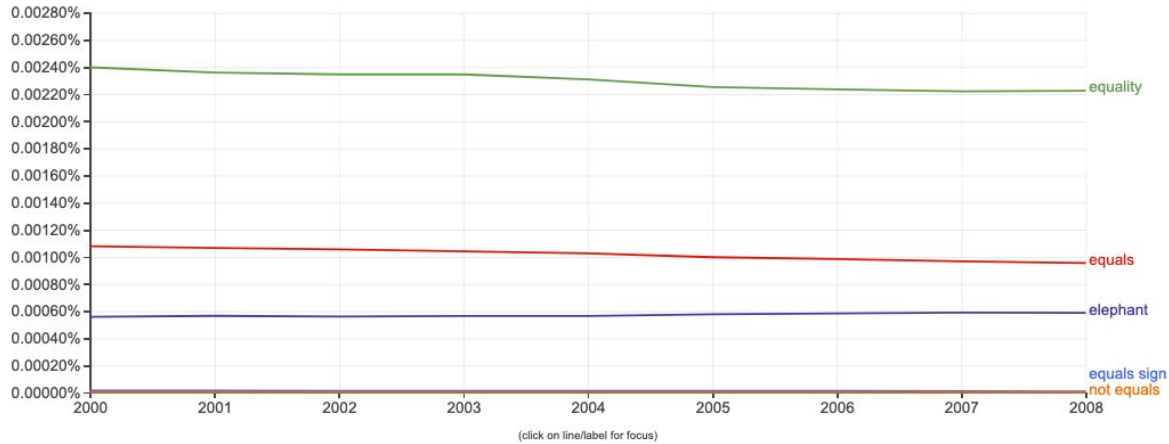
● equality Search term ● not equals Search term ● elephant Search term + Add comparison

Worldwide ▾ 2008 - present ▾ All categories ▾ Image Search ▾



NGram Viewer

Graph these comma-separated phrases: case-insensitive
 between and from the corpus with smoothing of [Search lots of books](#)



Multiple Usages

The first, and perhaps most obvious, use of the EQUAL SIGN will be in mathematical applications--from the simplest equations to hyper-complex theorems, the EQUAL SIGN serves the crucial role of either providing an answer or assigning a given value to a particular symbol (“assume that *c* EQUALS the speed of light...”) In a broader sense, the EQUAL SIGN can be used to represent the quest for *equality* of any oppressed group; it is easy to imagine women, POC, and LGBTQ+ individuals using the EQUALS SIGN alongside their own symbols to capture the fight for equal rights. Other, less socially-minded possibilities include joke equations (“grumpy face plus ice cream EQUALS happy face”) and simple comparisons between objects (“chicken EQUALS fish” for dinner).

Use in sequences

The EQUAL SIGN, as the embodiment of equality and fairness, might be used in the following sequences. Please note that I am using an EQUAL SIGN throughout even these equations!

PLUS SIGN/MINUS SIGN/MULTIPLICATION SIGN/DIVISION SIGN + EQUAL SIGN= MATHEMATICAL TOTAL (every mathematical equation needs an equal sign!)

EQUAL SIGN + RELIGIOUS SYMBOL (of any combination)= EQUALITY OF RELIGIONS/“COEXIST” (the notion of “all religions are equal”)

EQUAL SIGN + PERSON (specifically black/of color) + RAISED FIST= EQUAL RIGHTS FOR ALL RACES (the notion that all races are equal)

EQUAL SIGN + WOMAN/FEMALE SIGN = FEMINISM/EQUAL RIGHTS FOR WOMEN (the notion that the sexes are equal)

EQUAL SIGN + RAINBOW FLAG/RAINBOW = EQUAL RIGHTS FOR LGBTQ+ INDIVIDUALS (the notion that all sexualities and genders are equal)

EQUAL SIGN + WOMAN CONSTRUCTION WORKER + MONEY = “EQUAL PAY FOR EQUAL WORK” (a social movement challenging the gender pay gap and insisting that all be paid equally for the same work)

EQUAL SIGN + FORBIDDEN + PERSON (specifically black/of color)/WOMAN/RAINBOW= INEQUALITY (pairing the EQUAL SIGN with the symbol of banning, plus the symbols of the social groups described above, will capture the idea of the existing inequality for these groups)

EQUAL SIGN + KISS: MAN, MAN or MAN IN TUXEDO/KISS: WOMAN, WOMAN or BRIDE= MARRIAGE EQUALITY (the longstanding fight for same-sex marriage, captured by the term “marriage equality”)

EQUAL SIGN + CLASSICAL BUILDING = EQUAL BEFORE THE LAW (a central concept in democracies--that all people, regardless of status, are subject to laws)

EQUAL SIGN + PERSON= “ALL MEN ARE CREATED EQUAL” (One of the “self-evident truths” of the United States Declaration of Independence, and *the* defining concept for all those who fight for human rights--that people are equal to one another no matter what)

EQUAL SIGN + SCHOOLHOUSE/TEACHER= EQUAL EDUCATION (the notion that all people deserve the right to educational opportunities)

Breaking new ground.

While there are many mathematical emoji, the EQUAL SIGN’s more metaphoric uses--that is, representing equality of sex, creed, race, sexual orientation, gender, and status--is a way for the Unicode Library to present these possibilities *without* presenting a stance on the subject. It is up to the individual user to decide how to combine the emoji. If the demand for specific, equal-rights centric emoji *does* emerge, the EQUAL SIGN will play an important role in making it happen!

Image Distinctiveness

Though deceptively simple--two horizontal lines atop each other--the EQUAL SIGN is unique among all other mathematical concepts, as it is the *only* symbol which succinctly represented the idea “this value is equivalent to this value.”

Completeness

The “Big Four” of mathematical operations--addition, subtraction, multiplication, and division--are currently represented by emoji. But the key to *every* equation--the EQUAL SIGN--is not present. Without an EQUAL SIGN, an equation is incomplete--and so is the Unicode Library.

1342	U+2611													check box with check
1343	U+2714													check mark
1344	U+2716													multiplication sign
1345	U+274C													cross mark
1346	U+274E													cross mark button
1347	U+2795													plus sign
1348	U+2796													minus sign
1349	U+2797													division sign

Frequently Requested

N/A.

Selection Factors – Exclusion

Overly Specific

Given that the EQUAL SIGN represents one concept quite succinctly, it cannot be said to be overly specific.

Open Ended

Since the EQUAL SIGN is the “last” of the mathematical operations, it is unlikely that others will be added afterward. Similarly, the concept of EQUALITY can be applied, via the EQUAL SIGN, to any of the above minority groups plus those unlisted.

Already Representable

Nothing in the current Unicode Library represents the concept of the EQUAL SIGN.

Logos, brands, UI icons, signage, specific people, deities

The Human Rights Campaign--the “largest LGBTQ advocacy group and political lobbying organization in the United States”--does use a yellow EQUAL SIGN as their logo. However, the specific colors of that EQUAL SIGN--yellow on a blue background--set it apart from the gray and white pattern the Unicode Library will use. Plus, the generic concept of an EQUAL SIGN is not trademarked by any one group or individual.

Transient

As noted above, the EQUAL SIGN was created nearly 500 years ago, and is still used by mathematicians, teachers, human rights advocates, and--to be frank--*everyone* to capture the concept of equality, given math’s nature as a “universal language.” Nothing can replace the simplicity of the EQUAL SIGN!

Faulty Comparison

Given that no other image represents the notion of “equivalent to” as the EQUAL SIGN does, it cannot be compared to any other image; the closest is the word “is,” which is not an emoji at all.

Exact Images

While different patterns and designs of EQUAL SIGNS exist in different groups, the general concept--two horizontal lines stacked atop each other--are not exact; this is the concept captured in the proposed emoji.

Other Character Properties

The other character properties are suggested to be defined as follows.

General Category: So

Canonical Combining Class: 0

Bidirectional Class: ON

Decomposition Type:

Decomposition Mapping:

Numeric Type:

Numeric Value:

Bidirectional Mirrored:

N Unicode 1 Name:

ISO Comment:

Simple Uppercase Mapping:

Simple Lowercase Mapping:

Simple Titlecase Mapping:

Author Biographies

Christian Krenek (Christian.Krenek@gmail.com) may not like mathematics--he's always been an English and Arts type of guy--but he still values the equal sign in his writing! A proud gay man and advocate for equality in all forms, Christian knows the importance of the equal sign in simply but efficiently representing the goals of empowerment groups. He thanks you for taking the time to read his report on the *unequaled* equal sign!