# A reconstruction of Krause's table of factors (1804)

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# 1 Krause (1781–1832)

Karl Christian Friedrich Krause (1781–1832) was a German philosopher. He studied philosophy and mathematics at the University of Jena. He later went to Berlin, Göttingen and Munich. In Göttingen, he was one of Schopenhauer's teachers.

# 2 Krause's table of factors and primes

One of Krause's first books was his table of factors and primes, published in 1804 [9]. In this book, Krause gave a number of lists in a very compact and unusual way.[1] Here, we will only focus on two of his tables: the table of primes and the table of factors.

In his introduction, Krause mentions the tables of Lambert [10] and Felkel [2, 3, 4, 5], and he understands the objections towards the use of letters for numbers which was favored by Felkel. He nevertheless decided to provide his two short tables, in order to show that letters can be used more conveniently than in Felkel's table. The main tables in Krause's book, however, do not use letters.

Krause wrote that his tables were computed (*neuberechnet*), and presumably not copied, although he certainly compared his tables with earlier ones. He also announced an extension of his table of factors to one million (with only the smallest factors), as well as an extension of the table of primes to two millions. These tables have never been published.

## 2.1 Krause's table of primes

In this table, Krause gave a list of all primes from 1 to 100000. Each prime is encoded by a letter and the whole table fits on two pages. The first five primes are given explicitely, and they are followed by the list "efghkmnprstwyzbdegilo 1abcdflnpquvxabeghmnop 2eklmoqrvxacdfhin 3cefgnptuwybegilo ..."

The first sequence gives the primes up to 97. The symbols are to be read in the following table :

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 03 | 07 | 09 | 11 | 13 | 17 | 19 | 21 | 23 | 27 | 29 | 31 | 33 | 37 | 39 | 41 | 43 | 47 | 49 | 51 | 53 | 57 | 59 | 61 | 63 | 67 | 69 | 71 | 73 | 77 | 79 | 81 | 83 | 87 | 89 | 91 | 93 | 97 | 99 |
| a | b | c | d | e | f | g | h | i | k | l | m | n | o | p | q | r | s | t | u | v | w | x | y | z | a | b | c | d | e | f | g | h | i | k | l | m | n | o | p |

We have therefore the primes 11 (e), 13 (f), 17 (g), etc. The symbols from "a" to "p" can refer to two different numbers, but the sequences above remove any ambiguity. The last symbol of the first sequence, namely "o", represents 97, and not 33, because the numbers represented by the symbols appear in increasing order.

After 97, we have a new sequence, starting with "1". This sequence gives all prime numbers between 100 and 200. The first digit is "1" and the two other digits are given by the symbol, using the encoding given above. Each sequence therefore corresponds to an interval of 100 integers. Every ten such sequences, the prefix is given in isolation: 10, 20, etc. Every hundred such sequences, the prefix (or rather the number of thousands) is given in the margin.

One might wonder about the ambiguities which could arise given that some symbols are duplicated in the encoding list. It appears that there is only one ambiguous case in

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[1] One of the lists (see figure 5), in particular, gives the Farey sequence from $\frac{1}{30}$ to 1, with denominators not exceeding 30. But such lists of fractions were not yet called Farey sequences by then.

the range of the table, namely for the interval 31400 to 31500. In this interval, the first prime is 31469, and the first alphabet is not at all used, causing possible confusion. In that case, Krause wrote the sequence "4*cfhl*" instead of "4cfhl", and he drew the attention of the reader to this special case at the end of his list of primes.

In our reconstruction, we have faithfully followed Krause's scheme and used exactly the same line and page breaks as he did. During the reconstruction, we have found one error in Krause's table, namely that he gave 16587 and 16593 as prime, the correct values being 16567 and 16573. This was possibly a typographic error at some point, as the two errors seem to be related. There may be other errors, but at least the values at the line breaks should otherwise be correct.

## 2.2 Krause's table of factors

In this table, Krause gave the list of all factors for all numbers not divisible by 2, 3, and 5 until 10000. Each number is also encoded by a letter, but the factors are always given explicitely. Moreover, there is now no ambiguity in the symbols, since Krause uses latin and gothical alphabets.

Krause intended to give all factors, and not merely the simple factors. The composite numbers are given with prefixes and almost the same symbols as above. The only difference, apart from the use of a second alphabet, are that the latin "o" is written "$\varphi$," presumably in order to avoid a confusion with the digit "o," although such a confusion normally does not arise.

| 01 | 03 | 07 | 09 | 11 | 13 | 17 | 19 | 21 | 23 | 27 | 29 | 31 | 33 | 37 | 39 | 41 | 43 | 47 | 49 | 51 | 53 | 57 | 59 | 61 | 63 | 67 | 69 | 71 | 73 | 77 | 79 | 81 | 83 | 87 | 89 | 91 | 93 | 97 | 99 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| a | b | c | d | e | f | g | h | i | k | l | m | n | $\varphi$ | p | q | r | s | t | u | v | w | x | y | z | 𝔞 | 𝔟 | 𝔠 | 𝔡 | 𝔢 | 𝔣 | 𝔤 | 𝔥 | 𝔦 | 𝔨 | 𝔩 | 𝔪 | 𝔫 | 𝔬 | 𝔭 |

The list of composite numbers starts with

u 7.7 𝔣 7.11 𝔪 7.13 - 1 - h 7.17 i 11.11 $\varphi$ 7.19 s 11.13 z 7.23 𝔠 13.13 𝔨 11.17 - 2 - ...

The first "u" stands for 49, then "𝔣" is for 77, and so on. Hundreds are separated like in the first table, so that the first "h" stands for the number 119.

Each composite number is followed by the list of its simple factors, separated by dots. When a simple factor has a multiplicity greater than 1, it is repeated, as for 9n = 931 = 7 × 7 × 19:

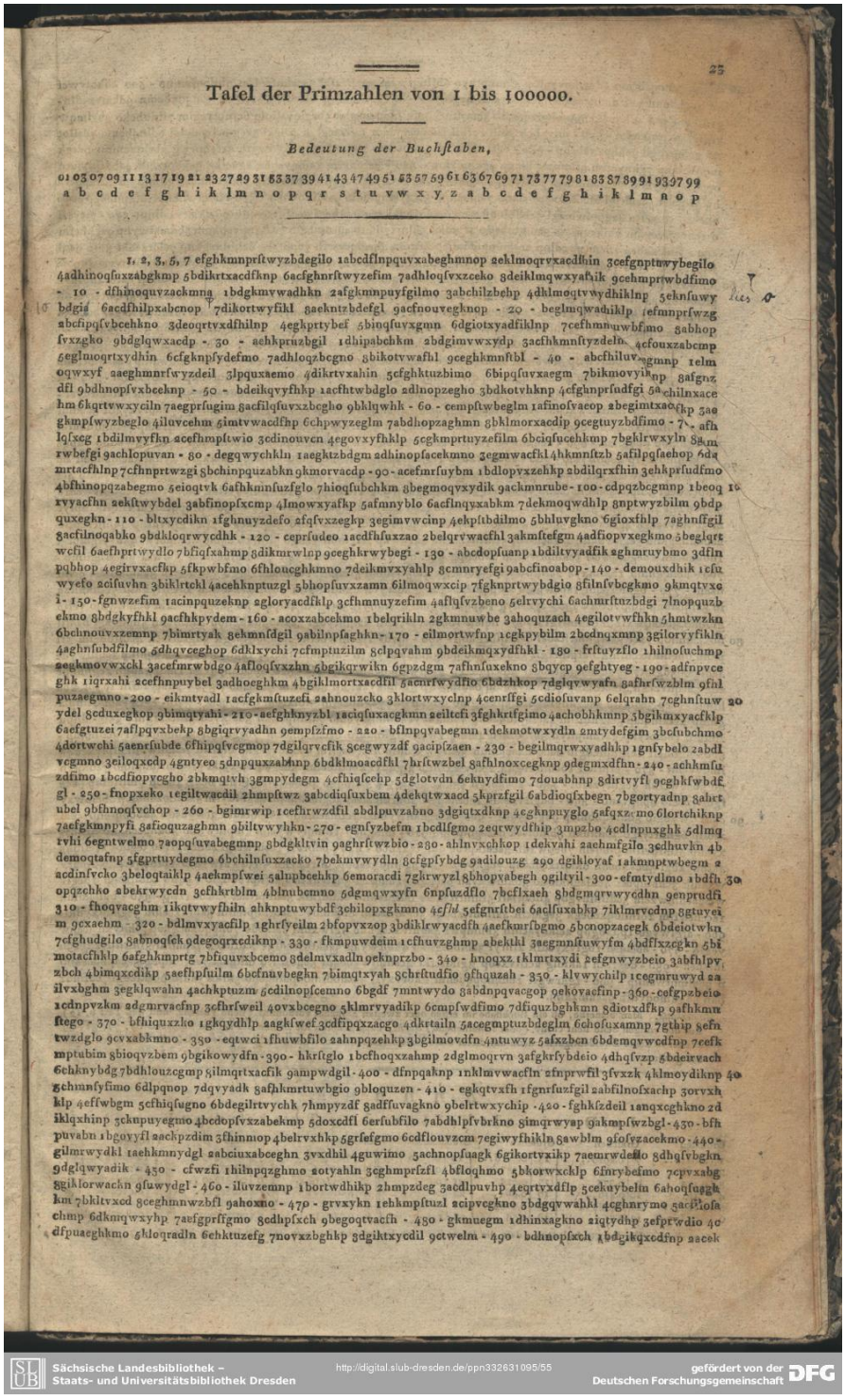
... - 9 - a 17.53 f 11.83 g 7.131 k 13.71 n 7.7.19.133.49 s 23.41 ...

This example also shows that the list of simple factors given in increasing order is followed by the list of composite factors given in decreasing order. 931 has two such composite factors (other than itself), namely 133 and 49.

Although Krause intended to give all factors, the lists of composite factors are often incomplete. One of the last numbers of the table is 9947 and Krause omits the factors 203 and 49. His list of factors should have been instead

t 7.7.7.29.1421.343.203.49

Since Krause forgot a number of composite factors, we have decided not to follow his line breaks in our reconstruction. It should nevertheless be useful, first in order to convey Krause's scheme, and second in order to provide a tool for checking Krause's table.



23

Tafel der Primzahlen von 1 bis 100000.

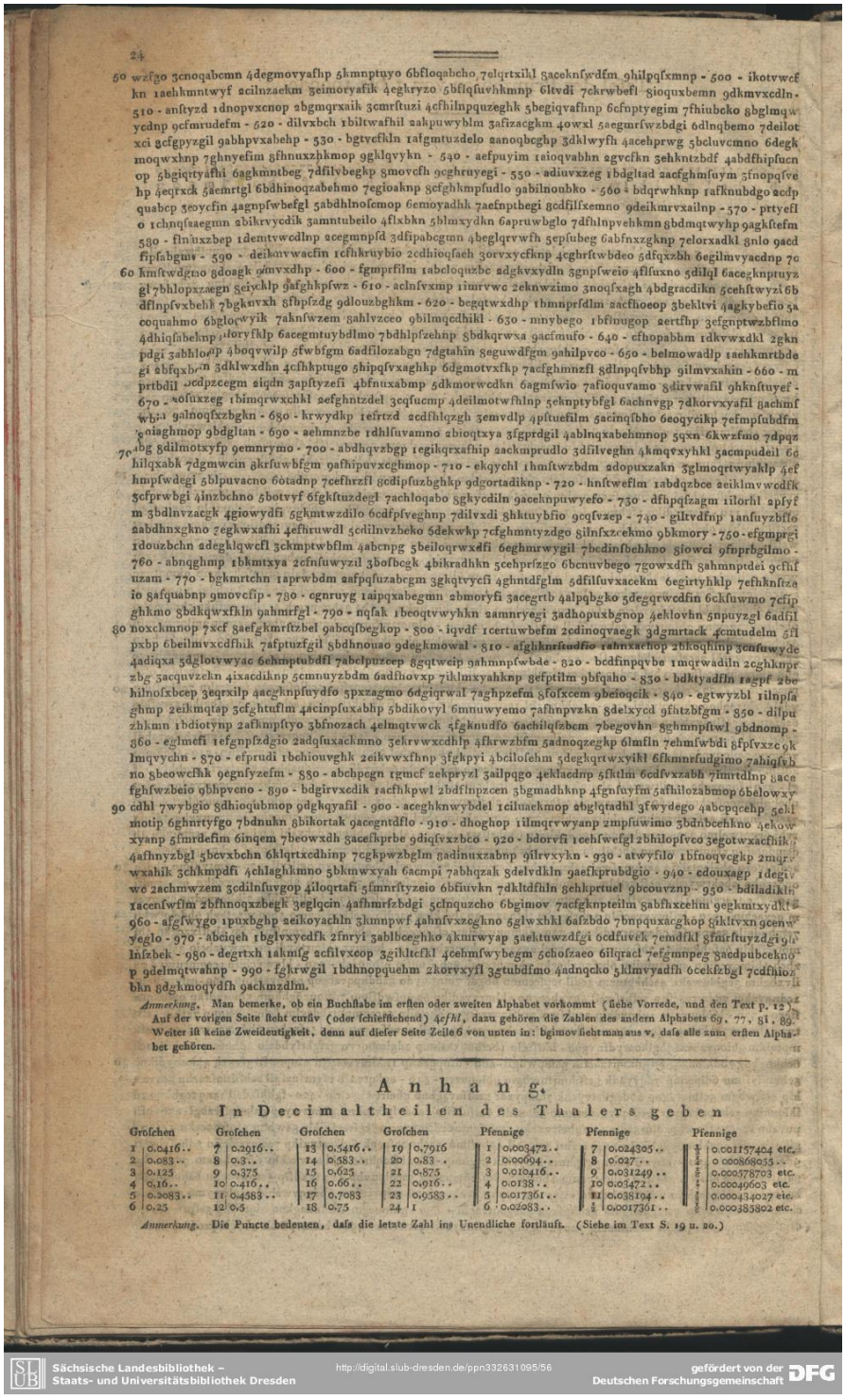
*Bedeutung der Buchſtaben,*

01 03 07 09 11 13 17 19 21 23 27 29 31 33 37 39 41 43 47 49 51 53 57 59 61 63 67 69 71 73 77 79 81 83 87 89 91 93 97 99
a b c d e f g h i k l m n o p q r s t u v w x y z a b c d e f g h i k l m n o p

1, 2, 3, 5, 7 efghkmnprſtwyzbdegilo 1abcdflnpquvxabeghmnop 2eklmoqrvxacdfhin 3cefgnptuwybegilo
4adhinoqſuxzabgkmp 5bdikrtxacdfknp 6acfghnrſtwyzefim 7adhloqſvxzceko 8deiklmqwxyafhik 9cehmprwbdfimo
- 10 - dfhinoquvzackmnq 1bdgkmvwadhkn 2afgkmnpuyfgilmo 3abchilzbehp 4dhlmoqtvwydhiklnp 5eknſuwy
bdgiq 6acdfhilpxabcnop 7dikortwyfikl 8aeknttzbdefgl 9acfnouvegknop - 20 - beglmqwadhiklp 1efmnprſwzg
abcfipqſvbcehkno 3deoqrtvxdfhilnp 4egkprtybcf 5binqſuvxgmn 6dgiotxyadfiklnp 7cefhmnuwbfimo 8abhop
ſvxzgko 9bdglqwxacdp - 30 - achkpruzbgil 1dhipabchkm 2bdgimvwxydp 3acfhkmnſtyzdeln 4cfouxzabcmp
5eglmoqrtxydhin 6cfgknpſydefmo 7adhloqzbcgno 8bikotvwafhl 9ceghkmnſtbl - 40 - abcfhiluvxgmnp 1elm
oqwxyf 2aeghmnrſwyzdeil 3lpquxaemo 4dikrtvxahin 5cfghktuzbimo 6bipqſuvxaegm 7bikmovyikmnp 8afgnz
dfl 9bdhnopſvxbceknp - 50 - bdeikqvyfhkp 1acfhtwbdglo 2dlnopzegho 3bdkotvhknp 4cfghnprſudfgi 5achilnxace
hm 6kqrtvwxyciln 7aegprſugim 8acfilqſuvxzbcgho 9bklqwhk - 60 - cempſtwbeglm 1afinoſvaeop 2begimtxacfkp 3ae
gkmpſwyzbeglo 4iluvcehm 5imtvwacdfhp 6chpwyzeglm 7abdhopzaghmn 8bklmorxacdip 9cegtuyzbdfimo - 70 - afh
lqſxeg 1bdilmvyfkn 2cefhmpſtwio 3cdinouvcn 4egovxyfhklp 5cgkmprtuyzefilm 6bciqſucehkmp 7bgklrwxyln 8gm
rwbefgi 9achlopuvan - 80 - degqwychkln 1aegktzbdgm 2dhinopſacekmno 3cegmwacfkl 4hkmnſtzb 5afilpqſaehop 6dq
mrtacfhlnp 7cfhnprtwzgi 8bchinpquzabkn 9kmorvacdp - 90 - acefmrſuybm 1bdlopvxzehkp 2bdilqrxfhin 3ehkprſudfmo
4bfhinopqzabegmo 5eioqtvk 6afhkmnſuzfglo 7hioqſubchkm 8begmoqvxydik 9ackmnrube - 100 - cdpqzbcgmnp 1beoq 10
rvyacfhn 2ekſtwybdel 3abfinopſxcmp 4lmowxyafkp 5afmnyblo 6acflnqvxabkm 7dekmoqwdhlp 8nptwyzbilm 9bdp
quxegkn - 110 - bltxycdikn 1fghnuyzdefo 2fqſvxzegkp 3egimvwcinp 4ekpſtbdilmo 5bhluvgkno 6gioxfhlp 7aghnſſgil
8acfilnoqabko 9bdkloqrwycdhk - 120 - ceprſudeo 1acdfhſuxzao 2belqrvwacfhl 3akmſtefgm 4adfiopvxegkmo 5beglqrt
wcfil 6aefhprtwydlo 7bfiqſxahmp 8dikmrwlnp 9ceghkrwybegi - 130 - abcdopſuanp 1bdiltvyadfik 2ghmruybmo 3dfln
pqbhop 4egirvxacfkp 5fkpwbfmo 6fhloucghkmno 7deikmvxyahlp 8cmnryefgi 9abcfinoabop - 140 - demouxdhik 1cfu
wyefo 2cifuvhn 3bikltckl 4acehknptuzgl 5bhopſuvxzamn 6ilmoqwxcip 7fgknprtwybdgio 8filnſvbcgkmo 9kmqtvxc
i - 150 - fgnwzefim 1acinpquzeknp 2gloryacdfklp 3cfhmnuyzefim 4aflqſvzbeno 5elrvychi 6achmrſtnzbdgi 7lnopquzb
ekmo 8bdgkyfhkl 9acfhkpydem - 160 - acoxzabcekmo 1belqrikln 2gkmnuwbe 3ahoquzach 4egilotvwfhkn 5hmtwzkn
6bchnouvxzemnp 7bimrtyak 8ekmnſdgil 9abilnpſaghkn - 170 - eilmortwfnp 1cgkpybilm 2bcdnqxmnp 3gilorvyfikln
4aghnſubdfilmo 5dhqvceghop 6dklxychi 7cfmptuzilm 8clpqvahm 9bdeikmqxydfhkl - 180 - frſtuyzflo 1hilnoſuchmp
2egkmovwxckl 3acefmrwbdgo 4afloqſvxzhn 5bgikqrwikn 6gpzdgm 7afhnſuxekno 8bqycp 9efghtyeg - 190 - adfnpvce
ghk 1iqrxahi 2cefhnpuybel 3adhoeghkm 4bgiklmortxacdfil 5acnrſwydflo 6bdzhkop 7dglqvwyafn 8afhrſwzblm 9fhl
puzaegmno - 200 - eikmtyadl 1acfgkmſtuzefi 2ahnouzcko 3klortwxyclnp 4cenrſſgi 5cdioſuvanp 6elqrahn 7eghnſtuw 20
ydel 8cduxegkop 9bimqtyahi - 210 - acfghknyzbl 1aciqſuxacgkmn 2eiltcfi 3fghkrtfgimo 4achobhkmnp 5bgikmxyacfklp
6aefgtuzei 7aflpqvxbekp 8bgiqrvyadhn 9empfzfmo - 220 - bflnpqvabegmn 1dekmotwxydln 2mtydefgim 3bcfubchmo
4dortwchi 5aenrſubde 6fhipqſvcgmop 7dgilqrvcfik 8cegwyzdf 9acipſzaen - 230 - begilmqrwxyadhkp 1gnfybelo 2abdl
vcgmno 3eiloqxcdp 4gntyeo 5dnpquxzabhnp 6bdklmoacdfhl 7hrſtwzbel 8afhlnoxcegknp 9degmxdfhn - 240 - achkmſu
zdfimo 1bcdfiopvcgho 2bkmqtvh 3gmpydegm 4cfhiqſcehp 5dglotvdn 6eknydfimo 7douabhnp 8dirtvyfl 9cghkfwbdf
gl - 250 - fnopxeko 1egiltwacdil 2hmpſtwz 3abcdiqſuxbem 4dekqtwxacd 5kprzfgil 6abdioqſxbegn 7bgortyadnp 8ahrt
ubel 9bfhnoqſvchop - 260 - bgimrwip 1cefhrwzdfil 2bdlpuvzabno 3dgiqtxdknp 4cgknpuyglo 5afqxzcmo 6lortchiknp
7aefgkmnpyfi 8afioquzaghmn 9biltvwyhkn - 270 - egnſyzbefm 1bcdlfgmo 2eqrwydhip 3mpzbo 4cdlnpuxghk 5dlmq
rvhi 6egntwelmo 7aopqſuvabegmnp 8bdgkltvin 9aghrſtwzbio - 280 - ahlnvxchkop 1dekvahi 2achmfgilo 3cdhuvkn 4b
demoqtafnp 5fgprtuydegmo 6bchilnſuxzacko 7bekmvwydln 8cfgpſybdg 9adilouzg 290 dgikloyaf 1akmnptwbegm 2
acdinſvcko 3beloqtaiklp 4aekmpſwei 5alnpbcehkp 6emoracdi 7gkrwyzl 8bhopvabegh 9giltyil - 300 - efmtydlmo 1bdfh 30
opqzchko 2bekrwycdn 3cfhkrtblm 4blnubcmno 5dgmqwxyfn 6npſuzdflo 7bcflxaeh 8bdgmqrvwycdhn 9enprudfi
310 - fhoqvacghm 1ikqtvwyfhiln 2ahknptuwybdf 3chilopxgkmno 4efhl 5efgnrſtbei 6aclſuxabkp 7iklmrvcdnp 8gtuyei
m 9cxaehm - 320 - bdlmvxyacfilp 1ghrſyeilm 2bfopvxzop 3bdiklrwyacdfh 4aefkmrſbgmo 5bcnopzacegk 6bdeiotwkn
7cfghudgilo 8abnoqſck 9degoqrxcdiknp - 330 - fkmpuwdeim 1cfhuvzghmp 2bekthl 3aegmnſtuwyfm 4bdflxzcgkn 5bi
motacfhklp 6afghkmprtg 7bfiquvxbcemo 8delmvxadln 9eknprzbo - 340 - hnoqxz 1klmrtxydi 2efgnwyzbeio 3abfhlpy
zbch 4bimqxcdikp 5aefhpſuilm 6bcfnuvbegkn 7bimqtxyah 8chrſtudfio 9fhquzah - 350 - klvwychilp 1ccgmruwyd 2a
ilvxbghm 3egklqwahn 4achkptuzm 5cdilnopſcemno 6bgdf 7mntwydo 8abdnpqvacgop 9ekovacfinp - 360 - cefgpzbeio
1cdnpvzkm 2dgmrvacfnp 3cfhrſweil 4ovxbcegno 5klmrvyadikp 6cmpſwdfimo 7dfiquzbghkmn 8diotxdfkp 9afhkmn
ſtego - 370 - bfhiquxzko 1gkqydhlp 2aghſwef 3cdfipqxzacgo 4dkrtailn 5acegmptuzbdeglm 6chofuxamnp 7gthip 8efn
twzdglo 9cvxabkmno - 380 - eqtwci 1fhuwbfilo 2ahnpqzehkp 3bgilmovdfn 4ntuwyz 5afxzbcn 6bdemqvwcdfnp 7cefk
mptubim 8bioqvzbem 9bgikowydfn - 390 - hkrſtglo 1bcfhoqxzahmp 2dglmoqrvn 3afgkrfybdeio 4dhqſvzp 5bdeirvach
6chknybdg 7bdhlouzcgmp 8ilmqrtxacfik 9ampwdgil - 400 - dfnpqaknp 1nklmvwacfln 2fnprwfil 3fvzzk 4klmoydiknp 40
5chmnſyfimo 6dlpqnop 7dqvyadk 8afhkmrtuwbgio 9bloquzen - 410 - egkqtvxfh 1fgnrſuzfgil 2abfilnofxachp 3orvxh
klp 4effwbgm 5cfhiqſugno 6bdegilrtvychk 7hmpyzdf 8adfſuvagkno 9belrtwxychip - 420 - fghkſzdeil 1anqxcghkno 2d
iklqxhinp 3ckmpuyegmo 4bcdopſvxzabekmp 5doxcdfl 6erſubfilo 7abdhlpſvbrkno 8imqrwyap 9akmpſwzbgl - 430 - bfh
puvabn 1bgovyfl 2aachpzdim 3fhinniop 4belrvxhkp 5grſefgmo 6cdflouvzcm 7egiwyfhikln 8awblm 9fofyzacekmo - 440 -
gilmrwydkl 1aehkmnydgl 2abciuxabceghn 3vxdhil 4guwimo 5achnopſuagk 6gikortvxikp 7aemrwdefilo 8dhqſvbgkn
9dglqwyadik - 450 - cfwzfi 1hilnpqzghmo 2otyahln 3cghmprſzfl 4bfloqhmo 5bkorwxcklp 6fnrybefmo 7cpvxabg
ggikorwackn 9fuwydgl - 460 - iluvzemnp 1bortwdhikp 2hmpzdeg 3acdlpuvhp 4eqrtvxdflp 5cekuybelm 6ahoqſuggk
km 7bkltvxcd 8ceghmnwzbfl 9ahoxno - 470 - grvxykn 1ehkmpſtuzl 2cipvcgkno 3bdgqvwahkl 4cghnrymo 5acflofa
chmp 6dknqwxyhp 7aefgprſfgmo 8cdlnpſxch 9begoqtvacfh - 480 - gkmuegm 1dhinxagkno 2iqtydhp 3efprwdio 4c
dfpuaeghkmo 5kloqradln 6ehktuzefg 7novxzbghkp 8dgiktxycdil 9ctwelm - 490 - bdhnopſxch 1bdgikqxcdfnp 2acek



Figure 1: The first page of Krause's table of primes. (source: Staats- und Universitätsbibliothek Dresden)



24

50 wzfgo 3cnoqabcmn 4degmovyaflhp 5kmnptuyo 6bfloqabcho 7elqrtxikl 8aceknfwdfm 9hilpqfxmnp - 500 - ikotvwcf
kn 1aehkmntwyf 2cilnzaekm 3eimoryafik 4egkryzo 5bflqfuvhkmnp 6ltvdi 7ckrwbefl 8ioquxbemn 9dkmvxcdln -
510 - anftyzd 1dnopvxcnop 2bgmqrxaik 3cmrftuzi 4cfhilnpquzeghk 5begiqvaflnp 6cfnptyegim 7fhiubcko 8bglmqw
ycdnp 9cfmrudefm - 520 - dilvxbch 1biltwafhil 2akpuwyblm 3afizacgkm 4owxl 5aegmrfwzbdgi 6dlnqbemo 7deilot
xci 8cfgpyzgil 9abhpvxabehp - 530 - bgtvcfkln 1afgmtuzdelo 2anoqbcghp 3dklwyfh 4acehprwg 5bcluvcmno 6degk
moqwxhnp 7ghnyefim 8fhnuxzhkmop 9gklqvykn - 540 - aefpuyim 1aioqvabhn 2gvcfkn 3ehkntzbdf 4abdfhipfucn
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hp 4eqrxck 5aemrtgl 6bdhimoqzabehmo 7egioaknp 8cfghkmpfudlo 9abilnoubko - 560 - bdqrwhknp 1afknubdgo 2cdp
quabcp 3eoycfin 4agnpfwbefgl 5abdhlnofcmop 6emoyadhk 7aefnptbegi 8cdfilfxemno 9deikmrvxailnp - 570 - prtyefl
o 1chnqfuaegmn 2bikrvycdik 3amntubeilo 4flxbkn 5blmxydkn 6apruwbglo 7dfhlnpvehkmn 8bdmqtwyhp 9agkftefm
580 - flnuxzbep 1demtvwcdlnp 2cegmnpfd 3dfipabcgmn 4beglqrvwfh 5epfubeg 6abfnxzgknp 7eloraxdkl 8nlo 9acd
fipfabgmn - 590 - deikmvwacfin 1cfhkruybio 2cdhioqfaeh 3orvxycfknp 4cghrftwbdeo 5dfqxzbh 6egilmvyacdnp 7c
60 kmftwdgno 8doagk omvxdhp - 600 - fgmprfilm 1abcloquzbc 2dgkvxydln 3gnpfweio 4flfuxno 5dilql 6acegknptuyz
gl 7bhlopxzaegn 8eiycklp 9afghkpfwz - 610 - aclnfvxmp 1imrvwc 2eknwzimo 3noqfxagh 4bdgracdikn 5cehftwyzi 6b
dflnpfvxbehk 7bgknvxh 8fhpfzdg 9dlouzbghkm - 620 - begqtwxdhp 1hmnprfdlm 2acfhoeop 3bekltvi 4agkybefio 5a
coquahmo 6bglocwyik 7aknfwzem 8ahlvzceo 9bilmqcdhikl - 630 - mnybego 1bfinugop 2ertfhp 3efgnptwzbflmo
4dhiqfabeknp 5loryfklp 6acegmtuybdlmo 7bdhlpfzehnp 8bdkqrwxa 9acfmufo - 640 - cfhopabhm 1dkvwxdkl 2gkn
pdgi 3abhlo op 4boqvwilp 5fwbfgm 6adfilozabgn 7dgtahin 8eguwdfgm 9ahilpvco - 650 - belmowadlp 1aehkmrtbde
gi 2bfqxb n 3dklwxdhn 4cfhkptugo 5hipqfvxaghkp 6dgmotvxfkp 7acfghmnzfl 8dlnpqfvbhp 9ilmvxahin - 660 - m
prtbdil 2cdpzcegm 3iqdn 4apftyzefi 4bfnuxabmp 5dkmorwcdkn 6agmfwio 7afioquvamo 8dirvwafil 9hknftuyef -
670 - aofuxzeg 1bimqrwxchkl 2efghntzdel 3eqfucmp 4deilmotwfhlnp 5eknptybfgl 6achnvgp 7dkorvxyafil 8achmf
wb 1 9alnoqfxzbgkn - 680 - krwydkp 1efrtzd 2cdfhlqzgh 3emvdlp 4pftuefilm 5acinqlbho 6eoqycikp 7efmpfubdfm
2eniaghmop 9bdgltan - 690 - aehmnzbe 1dhlfuvamno 2bioqtxya 3fgprdgil 4ablnqxabehmnop 5qxn 6kwzfmo 7dpqz
70 bg 8dilmotxyfp 9emnrymo - 700 - abdhqvzbgp 1egikqrxafhip 2aekmprudlo 3dfilveghn 4kmqrxyhkl 5acmpudeil 6e
hilqxabk 7dgmwcin 8kfuwbfgm 9afhipuvxcghmop - 710 - ekqychl 1hmftwzbdm 2dopuxzakn 3glmoqrtwyaklp 4ef
hmpfwdegi 5blpuvacno 6otadnp 7cefhrzfl 8cdipfuzbghkp 9dgortadiknp - 720 - hnftweflm 1abdqzbce 2eiklmvwcdfk
3cfprwbgi 4inzbchno 5botvyf 6fgkftuzdegl 7achloqabo 8gkycdiln 9aceknpuwyefo - 730 - dfhpqfzagm 1ilorhl 2pfyf
m 3bdlnvzacgk 4giowydfi 5gkmtwzdilo 6cdfpfveghnp 7dilvxdi 8hktuybfio 9cqfvzep - 740 - giltvdfnp 1anfuyzbflo
2abdhnxgkno 3egkwxafhi 4efhruwdl 5cdilnvzbeko 6dekwkp 7cfghmntyzdgo 8ilnfxzcekmo 9bkmory - 750 - efgmprgi
1douzbchn 2degklqwcfl 3ckmptwbflm 4abcnpg 5beiloqrwxdfi 6eghmrwygil 7bedinfbehkno 8iowci 9fnprbgilmo -
760 - abnqghmp 1bkmtxya 2cfnfuwyzl 3bofbcgk 4bikradhkn 5cehprfzgo 6bcnuvbego 7gowxdfh 8ahmnptdei 9cfhif
uzam - 770 - bgkmrtchn 1aprwbdm 2afpqfuzabcgm 3gkqtvycfi 4ghntdfglm 5dfilfuvxacekm 6egirtyhklp 7efhknftze
io 8afquabnp 9movcfip - 780 - cgnruyg 1aipqxabegmn 2bmoryfi 3acegrtb 4alpqbgko 5degqrwcdfin 6ckfuwmo 7cfip
ghkmo 8bdkqwxfkln 9ahmirfgl - 790 - nqfak 1beoqtvwyhkn 2amnryegi 3adhopuxbgnop 4eklovhn 5nputyzgl 6adfil
80 noxckmnop 7xcf 8aefgkmrftzbel 9abcqfbegkop - 800 - iqvdf 1certuwbefm 2cdinoqvaegk 3dgmrtack 4cmtudelm 5fl
pxbp 6beilmvxcdfhik 7afptuzfgil 8bdhnouao 9degkmowal - 810 - afghknrftudfio 1ahnxaehop 2bkoqhinp 3cnfuwyde
4adiqxa 5dglotvwyac 6ehmptubdfl 7abelpuzcep 8gqtweip 9ahmnpfwbde - 820 - bcdfinpqvbe 1mqrwadiln 2cghknpr
zbg 3acquvzekn 4ixacdiknp 5cmnuyzbdm 6adfhovxp 7iklmxyahknp 8efptilm 9bfqaho - 830 - bdktyadfln 1agpf 2be
hilnofxbcep 3eqrxilp 4acgknpfuydfo 5pxzagmo 6dgiqrwal 7aghpzefm 8fofxcem 9beioqcik - 840 - egtwyzbl 1ilnpfa
ghmp 2eikmqtap 3cfghtuflm 4acinpfuxabhip 5bdikovyl 6mnuwyemo 7afhnpvzkn 8delxycd 9fhtzbfgm - 850 - dilpu
zhkmn 1bdiotynp 2afkmpftyo 3bfnozach 4elmqtvwck 5fgknudfo 6achilqfzbcm 7begovhn 8ghmnpftwl 9bdnomp -
860 - eglmefi 1efgnpfzdgio 2adqfuxackmno 3ekrvwxcdhlp 4fkrwzbfm 5adnoqzegkp 6lmfln 7ehmfwbdi 8fpfvxzcgk
lmqvychn - 870 - efprudi 1bchiouvghk 2eikvwxfhnp 3fgkpyi 4bcilofehm 5degkqrtwxyikl 6fkmnrfudgimo 7ahiqfxb
no 8beowcfhk 9egnfyzefm - 880 - abchpegn 1rgmcf 2ekpryzl 3ailpqgo 4eklacdnp 5fktlm 6cdfvxzabh 7imrtdlnp 8ace
fghfwzbeio 9bhpveno - 890 - bdgirvxcdik 1acfhkpwl 2bdflnpzcen 3bgmadhknp 4fgnfuyfm 5afhilozabmop 6bclowxy
90 cdhl 7wybgio 8dhioqibmop 9dgkqyafil - 900 - aceghknwybdel 1ciluackmop 2bglqtadhl 3fwydego 4abcpqcehp 5ekl
motip 6ghnrtyfgo 7bdnukn 8bikortak 9acegntdflo - 910 - dhoghop 1ilmqrvwyanp 2mpfuwimo 3bdnbcehkno 4ekow
xyanp 5fmrdefim 6inqem 7beowxdh 8acefkprbe 9diqfvxzbco - 920 - bdorvfi 1cehfwefgl 2bhilopfvco 3egotwxacfhik
4afhnyzbgl 5bcvxbchn 6klqrtxcdhinp 7cgkpwzbglm 8adinuxzabnp 9ilrvxykn - 930 - atwyfilo 1bfnoqvcgkp 2mqr
wxahik 3chkmpdfi 4chlaghkmno 5bkmwxyah 6acmpi 7abhqzak 8delvdkln 9aefkprubdgio - 940 - cdouxagp 1degiv
wc 2achmwzem 3cdilnfuvgop 4iloqrtafi 5fmnrftyzeio 6bfiuvkn 7dkltdfhln 8ehkprtuel 9bcouvznp - 950 - bdiladikln
1acenfwflm 2bfhnoqxzbegk 3eglqcin 4afhmrfzbdgi 5clnquzcho 6bgimov 7acfgknpteilm 8abfhxcelm 9egkmtxydkl
960 - afgfwygo 1puxbghp 2eikoyachln 3kmnpwf 4ahnfvxzegkno 5glwxhkl 6afzbdo 7bnpquxacgkop 8iklvxn 9cenw
yeglo - 970 - abciqeh 1bglvxycdfk 2fnryi 3ablbceghko 4kmrwyap 5aeklruwzdfgi 6cdfuvek 7emdfkl 8fmrftuyzdgi 9h
lnfxbek - 980 - degrtxh 1akmfg 2cfilvxcop 3gikltcfkl 4cehmfwybegm 5chofzaeo 6ilqracl 7efgmnpeg 8acdpubcekno
p 9delmqtwahnp - 990 - fgkrwgil 1bdhnopquehm 2korvxyfl 3gtubdfmo 4adnqcko 5klmvyadfh 6cekfzbgl 7cdfhioz
bkn 8dgkmoqydfh 9ackmzdlm.

*Anmerkung.* Man bemerke, ob ein Buchſtabe im erſten oder zweiten Alphabet vorkommt (ſiehe Vorrede, und den Text p. 12). Auf der vorigen Seite ſteht curiv (oder ſchiefſtehend) *4efhl*, dazu gehören die Zahlen des andern Alphabets 69, 77, 81, 89. Weiter iſt keine Zweideutigkeit, denn auf dieſer Seite Zeile 6 von unten in: bgimov ſieht man aus w, daſs alle zum erſten Alphabet gehören.

## Anhang.

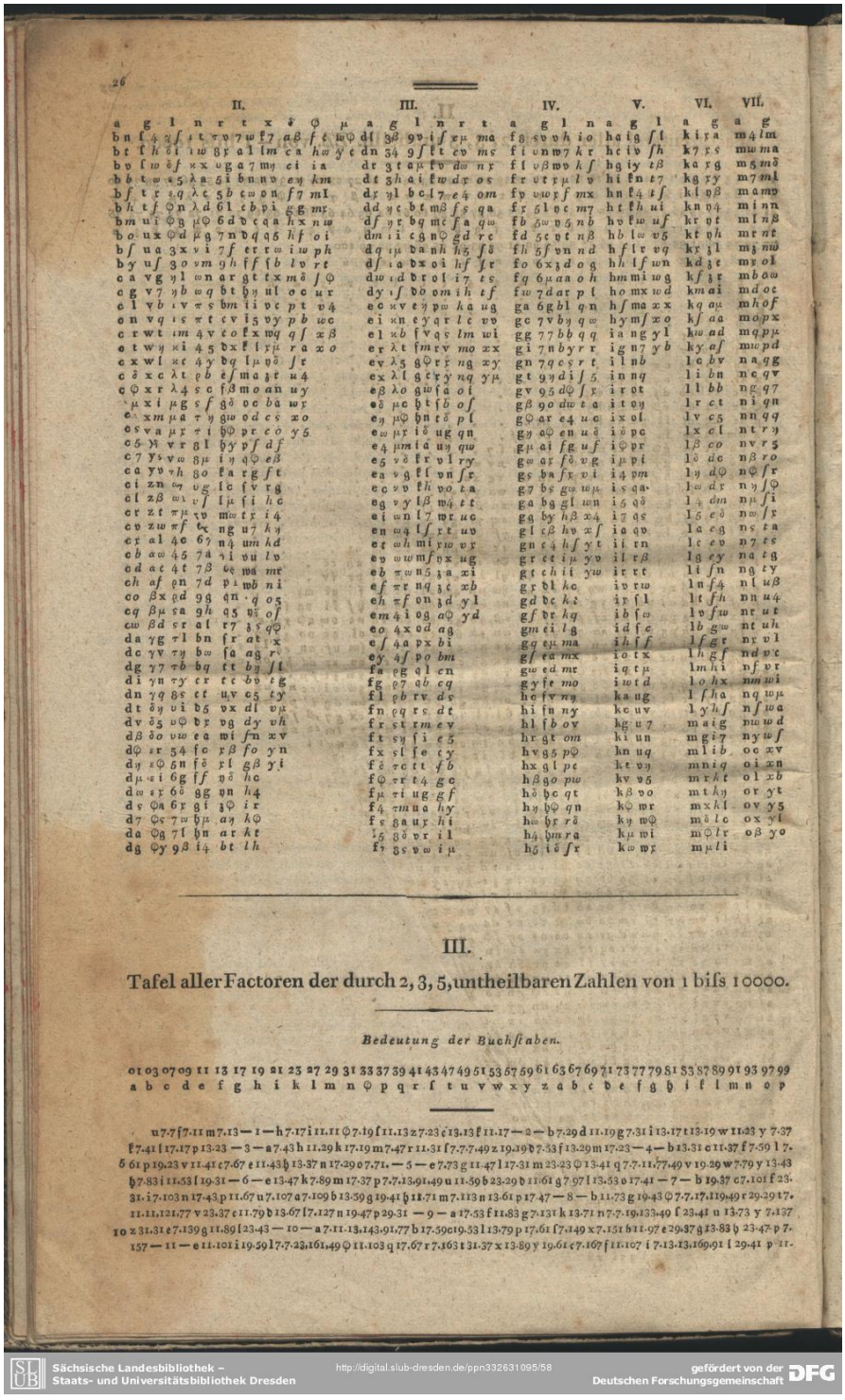
### In Decimaltheilen des Thalers geben

| Groſchen | | Groſchen | | Groſchen | | Groſchen | | Pfennige | | Pfennige | | Pfennige | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.0416.. | 7 | 0.2916.. | 13 | 0.5416.. | 19 | 0.7916 | 1 | 0.003472.. | 7 | 0.024305.. | $\frac{1}{2}$ | 0.001157404 etc. |
| 2 | 0.083.. | 8 | 0.3.. | 14 | 0.583.. | 20 | 0.83.. | 2 | 0.00694.. | 8 | 0.027.. | $\frac{1}{3}$ | 0.000868055... |
| 3 | 0.125 | 9 | 0.375 | 15 | 0.625 | 21 | 0.875 | 3 | 0.010416.. | 9 | 0.031249.. | $\frac{1}{4}$ | 0.000578703 etc. |
| 4 | 0.16.. | 10 | 0.416.. | 16 | 0.66.. | 22 | 0.916.. | 4 | 0.0138.. | 10 | 0.03472.. | $\frac{1}{5}$ | 0.00046603 etc. |
| 5 | 0.2083.. | 11 | 0.4583.. | 17 | 0.7083 | 23 | 0.9583.. | 5 | 0.017361.. | 11 | 0.038194.. | $\frac{1}{6}$ | 0.000434027 etc. |
| 6 | 0.25 | 12 | 0.5 | 18 | 0.75 | 24 | 1 | 6 | 0.02083.. | $\frac{1}{2}$ | 0.0017361.. | $\frac{1}{8}$ | 0.000385802 etc. |

*Anmerkung.* Die Puncte bedeuten, daſs die letzte Zahl ins Unendliche fortlauft. (Siehe im Text S. 19 u. 20.)



Figure 2: The second page of Krause's table of primes. (source: Staats- und Universitätsbibliothek Dresden)



26

II. III. IV. V. VI. VII.

III.

Tafel aller Factoren der durch 2, 3, 5, untheilbaren Zahlen von 1 bis 10000.

*Bedeutung der Buchstaben.*

01 03 07 09 11 13 17 19 21 23 27 29 31 33 37 39 41 43 47 49 51 53 57 59 61 63 67 69 71 73 77 79 81 83 87 89 91 93 97 99
a b c d e f g h i k l m n o p q r s t u v w x y z a b c d e f g h i k l m n o p

u 7.7 f 7.11 m 7.13 — 1 — h 7.17 i 11.11 o 7.19 f 11.13 z 7.23 c 13.13 f 11.17 — 2 — b 7.29 d 11.19 g 7.31 i 13.17 t 13.19 w 11.23 y 7.37 f 7.41 l 17.17 p 13.23 — 3 — a 7.43 h 11.29 k 17.19 m 7.47 r 11.31 l 7.7.7.49 z 19.19 b 7.53 f 13.29 m 17.23 — 4 — b 13.31 c 11.37 f 7.59 l 7.5 61 p 19.23 v 11.41 c 7.67 e 11.43 h 13.37 n 17.29 o 7.71. — 5 — e 7.73 g 11.47 l 17.31 m 23.23 o 13.41 q 7.7.11.77.49 v 19.29 w 7.79 y 13.43 h 7.83 i 11.53 l 19.31 — 6 — e 13.47 k 7.89 m 17.37 p 7.7.13.91.49 u 11.59 b 23.29 b 11.61 g 7.97 l 13.53 o 17.41 — 7 — b 19.37 c 7.101 f 23.31. i 7.103 n 17.43 p 11.67 u 7.107 a 7.109 b 13.59 g 19.41 h 11.71 m 7.113 n 13.61 p 17.47 — 8 — b 11.73 g 19.43 o 7.7.17.119.49 r 29.29 t 7.11.11.121.77 v 23.37 e 11.79 b 13.67 l 7.127 n 19.47 p 29.31 — 9 — a 17.53 f 11.83 g 7.131 k 13.71 n 7.7.19.133.49 f 23.41 u 13.73 y 7.137 10 z 31.31 e 7.139 g 11.89 l 23.43 — 10 — a 7.11.13.143.91.77 b 17.59 c 19.53 l 13.79 p 17.61 f 7.149 x 7.151 b 11.97 e 29.37 g 13.83 h 23.47 p 7.157 — 11 — e 11.101 i 19.59 l 7.7.23.161.49 o 11.103 q 17.67 r 7.163 t 31.37 x 13.89 y 19.61 c 7.167 f 11.107 i 7.13.13.169.91 l 29.41 p 11.



Figure 3: The first page of Krause's table of factors. (source: Staats- und Universitätsbibliothek Dresden)

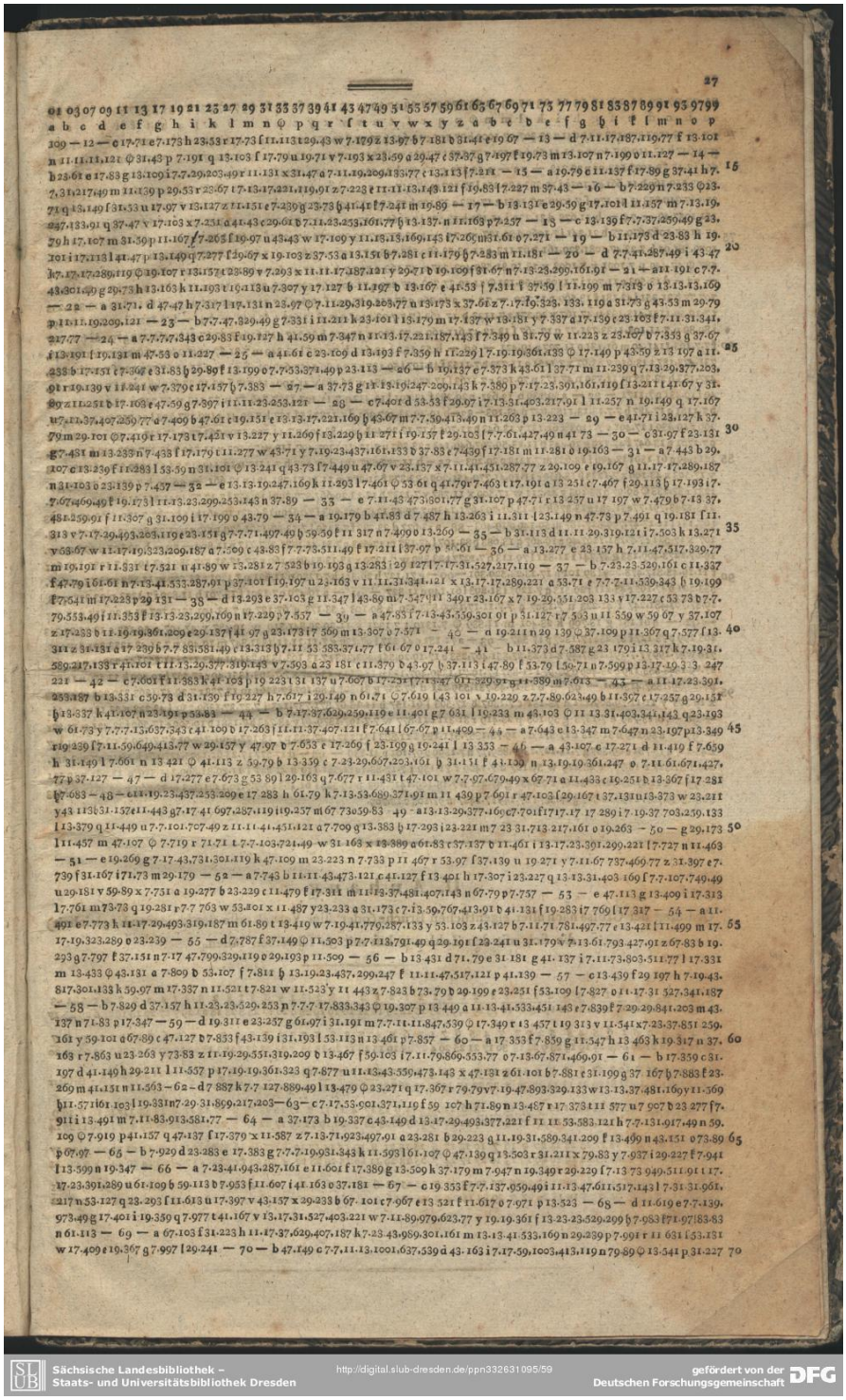
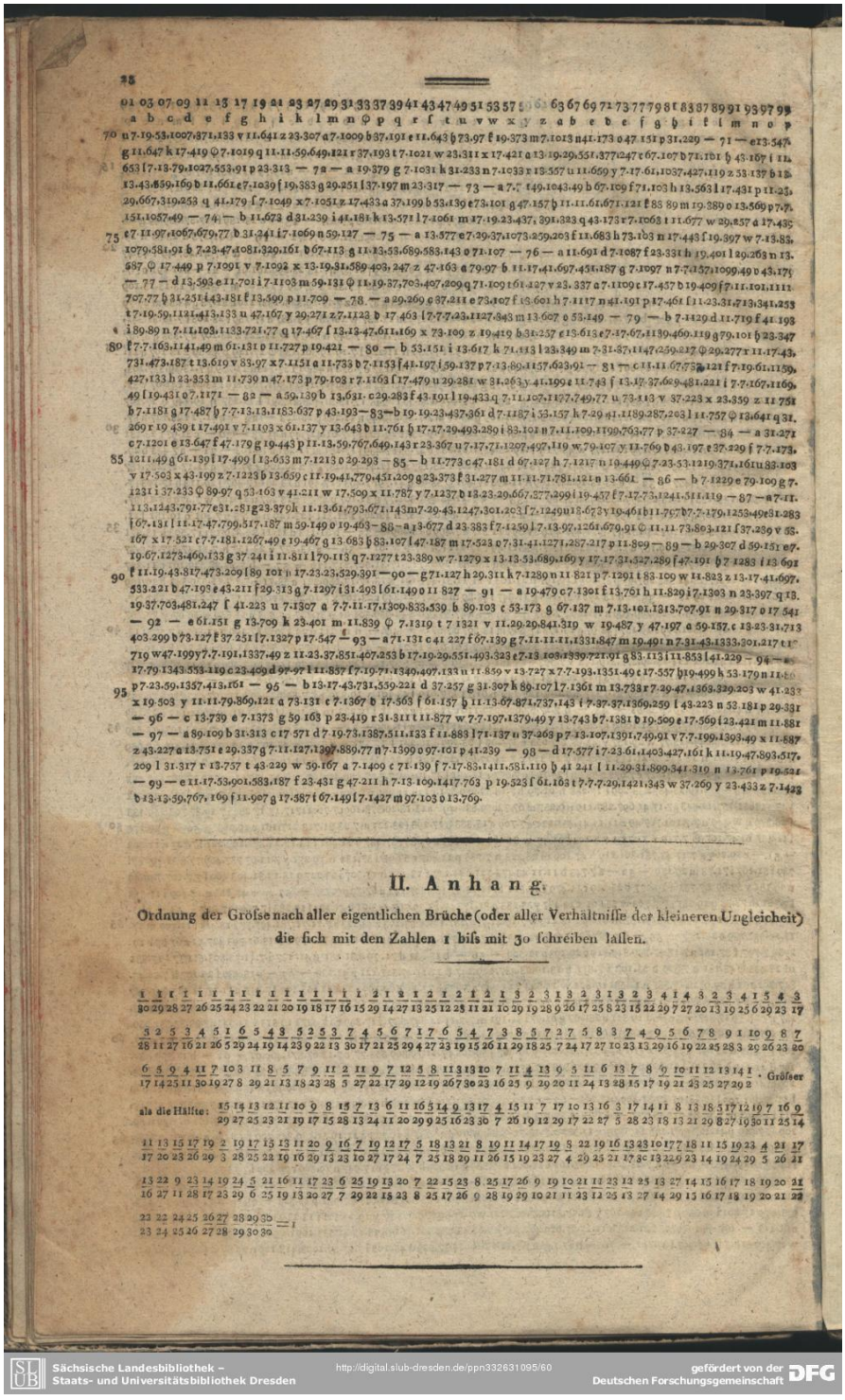



Figure 4: The second page of Krause's table of factors. (source: Staats- und Universitätsbibliothek Dresden)



II. Anhang.

Ordnung der Gröſse nach aller eigentlichen Brüche (oder aller Verhältniſſe der kleineren Ungleicheit) die ſich mit den Zahlen 1 biſs mit 30 ſchreiben laſſen.

Sächsische Landesbibliothek – Staats- und Universitätsbibliothek Dresden
http://digital.slub-dresden.de/ppn332631095/60
gefördert von der Deutschen Forschungsgemeinschaft DFG

Figure 5: The third page of Krause's table of factors. (source: Staats- und Universitätsbibliothek Dresden)

# References

The following list covers the most important references[2] related to Krause's table. Not all items of this list are mentioned in the text, and the sources which have not been seen are marked so. We have added notes about the contents of the articles in certain cases.


[1] Maarten Bullynck. Factor tables 1657–1817, with notes on the birth of number theory. *Revue d'histoire des mathématiques*, 16(2):133–216, 2010.

[2] Anton Felkel. *Tafel aller einfachen Factoren der durch 2, 3, 5 nicht theilbaren Zahlen von 1 bis 10 000 000. I. Theil. Enthaltend die Factoren von 1 bis 144000.* Wien: von Ehelenschen, 1776. [There is also a Latin edition [3] of this first part.] [reconstructed in [12]]

[3] Anton Felkel. *Tabula omnium factorum simplicum numerorum per 2, 3, 5 non divisibilium, ab 1 usque 10 000 000. Pars I. Exhibens factores ab 1 usque 144000.* Wien: A. Gheleniana, 1777. [Latin version of [2].] [not seen] [reconstructed in [12]]

[4] Anton Felkel. *Tabula factorum. Pars II. Exhibens factores numerorum ab 144001 usque 336000.* Wien: A. Gheleniana, 1777? [reconstructed in [12]]

[5] Anton Felkel. *Tabula factorum. Pars III. Exhibens factores numerorum ab 336001 usque 408000.* Wien: A. Gheleniana, 1777? [reconstructed in [12]]

[6] Christian Ernst Gabler. Literarische Anzeigen. *Intelligenzblatt der Allgemeine Literatur-Zeitung*, 4(206):1687–1688, 1803. [Review of Krause's book.]

[7] James Whitbread Lee Glaisher. *Report of the committee on mathematical tables.* London: Taylor and Francis, 1873. [Also published as part of the "Report of the forty-third meeting of the British Association for the advancement of science," London: John Murray, 1874. A review by R. Radau was published in the *Bulletin des sciences mathématiques et astronomiques*, volume 11, 1876, pp. 7–27]

[8] James Whitbread Lee Glaisher. Table, mathematical. In Hugh Chisholm, editor, *The Encyclopædia Britannica, 11th edition*, volume 26, pages 325–336. Cambridge, England: at the University Press, 1911.

[9] Karl Christian Friedrich Krause. *Factoren und Primzahlentafel von 1 bis 100000 neuberechnet und zweckmäßig eingerichtet nebst einer Gebrauchsanleitung und Abhandlung der Lehre von Factoren und Primzahlen.* Jena: Christian Ernst Gabler, 1804.


[2]**Note on the titles of the works:** Original titles come with many idiosyncrasies and features (line splitting, size, fonts, etc.) which can often not be reproduced in a list of references. It has therefore seemed pointless to capitalize works according to conventions which not only have no relation with the original work, but also do not restore the title entirely. In the following list of references, most title words (except in German) will therefore be left uncapitalized. The names of the authors have also been homogenized and initials expanded, as much as possible.

The reader should keep in mind that this list is not meant as a facsimile of the original works. The original style information could no doubt have been added as a note, but we have not done it here.

[10] Johann Heinrich Lambert. *Zusätze zu den Logarithmischen und Trigonometrischen Tabellen zur Erleichterung und Abkürzung der bey Anwendung der Mathematik vorfallenden Berechnungen.* Berlin: Haude und Spener, 1770. [the table of factors was reconstructed in [14]; [11] is a Latin translation of this book]

[11] Johann Heinrich Lambert and Anton Felkel. *Supplementa tabularum logarithmicarum et trigonometricarum.* Lisbon, 1798. [Latin translation of [10]; the table of factors was reconstructed in [13]]

[12] Denis Roegel. A reconstruction of Felkel's tables of primes and factors (1776). Technical report, LORIA, 2011. [This is a reconstruction and an extension of Felkel's tables [2, 3, 4, 5].]

[13] Denis Roegel. A reconstruction of Lambert and Felkel's table of factors (1798). Technical report, LORIA, Nancy, 2011. [This is a reconstruction of the table of factors in [11].]

[14] Denis Roegel. A reconstruction of Lambert's table of factors (1770). Technical report, LORIA, Nancy, 2011. [This is a reconstruction of the table of factors in [10].]

[15] Paul Peter Heinrich Seelhoff. Geschichte der Factorentafeln. *Archiv der Mathematik und Physik*, 70:413–426, 1884.

[16] Carl von Prantl. Krause, Karl Christian Friedrich. In Historische Kommission bei der Bayerischen Akademie der Wissenschaften, editor, *Allgemeine Deutsche Biographie*, volume 17, pages 75–79. Leipzig: Duncker & Humblot, 1883.

# Krause's table of factors (1804) (reconstruction, D. Roegel, 2011)

01 03 07 09 11 13 17 19 21 23 27 29 31 33 37 39 41 43 47 49 51 53 57 59 61 63 67 69 71 73 77 79 81 83 87 89 91 93 97 99
a b c d e f g h i k l m n o p q r s t u v w x y z a b c d e f g h i k l m n o p

1, 2, 3, 5, 7 efghkmnprstwyzbdegilo 1abcdflnpquvxabeghmnop 2eklmoqrvxacdfhin 3cefgnptuwybegilo 4adhinoqsuxzabgkmp 5bdikrtxacdfknp 6acfghnrstwyzefim 7adhloqsvxzceko 8deiklmqwxyafhik 9cehmprtwbdfimo - 10 - dfhinoquvzackmno 1bdgkmvwadhkn 2afgkmnpuyfgilmo 3abchilzbehp 4dklmoqtvwydhiklnp 5eknsuwy bdgio 6acdfhilpxabcnop 7dikortwyfikl 8aekntzbdefgl 9acfnouvegknop - 20 - beglmqwachiklp 1efmnprswzg 2bcfipqsvbcehkno 3deoqrtvxdfhilnp 4egkprtybef 5binqsuvxgmn 6dgiotxyadfiklnp 7cefhmnruwbflmo 8abhop svxzgko 9bdglqwxacdp - 30 - aehkpruzbgil 1dhipabchkm 2bdgimvwxydp 3acfhkmnstyzdelm 4cfouxzabcmp 5eglmoqrtxydhin 6cfgknpsydefmo 7adhloqzbcgno 8bikotvwafhl 9ceghkmnstbl - 40 - abcfhiluvxegmnp 1elm oqwxyf 2aeghmnrswyzdeilo 3lpquxaemo 4dikrtvxahin 5cfghktuzbimo 6bipqsuvxaegm 7bikmovyiklnp 8afgnz dfl 9bdhnopsvxbceknp - 50 - bdeikqvyfhkp 1acfhtwbdglo 2dlnopzegho 3bdkotvhknp 4cfghnprsudfgi 5abchilnxace hm 6kqrtvwxyciln 7aegprsugim 8acfilqsuvxzbcgho 9bklqwhk - 60 - cempstwbeglm 1afinosvaeop 2begimtxacdfkp 3ae gkmpswyzbeglo 4iluvcehm 5imtvwacdfhp 6chpwyzeglm 7abdhopzaghmn 8bklmorxacdip 9cegtuyzbdfimo - 70 - afh lqsxcg 1bdilmvyfkn 2cefhmpstwio 3cdinouvcn 4egovxyfhklp 5cgkmprtuyzefilm 6bciqsucehkmp 7bgklrwxyln 8gkm rwbefgi 9achlopuvan - 80 - degqwychkln 1aegktzbdgm 2dhinopsacekmno 3egmwacfkl 4hkmnstzb 5afilpqsaehop 6dkl mrtacfhlnp 7cfhnprtwzgi 8bchinpquzabkn 9kmorvacdp - 90 - acefmrsuybm 1bdlopvxzehkp 2bdilqrxfhin 3ehkprsudfmo 4bfhinopqzabegmo 5eioqtvk 6afhkmnsuzfglo 7hioqsubchkm 8begmoqvxydik 9ackmnrube - 100 - cdpqzbcgmnp 1beoq rvyacfhn 2ekstwybdel 3abfinopsxcmp 4lmowxyafkp 5afmnyblo 6acflnqvxabkm 7dekmoqwdhlp 8nptwyzbilm 9bdp quxegkn - 110 - bltxycdikn 1fghnuyzdefo 2fqsvxzegkp 3egimvwcinp 4ekpstbdilmo 5bhluvgkno 6gioxfhlp 7aghnsfgil 8acfilnoqabko 9bdkloqrwycdhk - 120 - ceprsudeo 1acdfhsuxzao 2belqrvwacfhl 3akmstefgm 4adfiopvxegkmo 5beglqrt wcfil 6aefhprtwydlo 7bfiqsxahmp 8dikmrwlnp 9ceghkrwybegi - 130 - abcdopsuanp 1bdiltvyadfik 2ghmruybmo 3dfln pqbhop 4egirvxacfkp 5fkpwbfmo 6fhloucghkmno 7deikmvxyahlp 8cmnryefgi 9abcfinoabop - 140 - demovxdhik 1csu wyefo 2cisuvhn 3biklrtckl 4acehknptuzgl 5bhopsuvxzamn 6ilmoqwxcip 7fgknprtwybdgio 8filnsvbcgkmo 9kmqtvxc i - 150 - fgnwzefim 1acinpquzeknp 2gloryacdfklp 3cfhmnuyzefim 4aflqsvzbeno 5elrvychi 6achmrstuzbdgi 7lnopquzb ekmo 8bdgkyfhkl 9acfhkpydem - 160 - acoxzabcekmo 1belqrikln 2gkmnuwbe 3ahoquzach 4egilotvwfhkn 5hmtwzbe 6bchnouvxzemnp 7bmrtyak 8ekmnsdgil 9abilnpsaghkn - 170 - eilmortwfnp 1cgkpybilm 2bcdnqxmnp 3gilorvyfikln 4aghnsubdfilmo 5dhqvceghop 6dklxychi 7cfmptuzilm 8clpqvahm 9bdeikmqxydfhkl - 180 - frstuyzflo 1hilnosuchmp 2egkmovwxckl 3acefmrwbdgo 4afloqsvxzhn 5bgikqrwikn 6gpzdgm 7afhnsuxekno 8bqycp 9efghtyeg - 190 - adfnpvce ghk 1iqrxahi 2cefhnpuybel 3adhoeghkm 4bgiklmortxacdfil 5acnrswydfio 6bdzhkop 7dglqvwyafn 8afhrswzblm 9fhl puzaegmno - 200 - eikmtvadl 1acfgkmstuzefi 2ahnouzcko 3klortwxyclnp 4cenrsfgi 5cdiosuvanp 6elqrahn 7cghnstuw ydel 8cduxegkop 9bimqtyahi - 210 - aefghknyzbl 1aciqsuxacgkmn 2eiltcfi 3fghkrtfgimo 4achobhkmnp 5bgikmxyacfklp 6aefgtuzei 7aflpqvxbekp 8bgiqrvyadhn 9empszfmo - 220 - bflnpqvabegmn 1dekmotwxydln 2mtydefgim 3bcsubchmo 4dortwchi 5aenrsubde 6fhipqsvcgmop 7dgilqrvcfik 8cegwyzdf 9acipszaen - 230 - begilmqrwxyadhkp 1gnsybelo 2abdl vcgmno 3eiloqxcdp 4gntyeo 5dnpquxzabhnp 6bdklmoacdfkl 7hrstwzbel 8afhlnoxcegknp 9degmxdfhn - 240 - achkmsu zdfimo 1bcdfiopvcgho 2bkmqtvh 3gmpydegm 4cfhiqscehp 5dglotvdn 6eknydfimo 7douabhnp 8dirtvyfl 9cghkswbdf gl - 250 - fnopxeko 1egiltwacdil 2hmpstwz 3abcdiqsuxbem 4dekqtwxacd 5kprzfgil 6abdioqsxbegn 7bgortyadnp 8ahrt ubel 9bfhnoqsvchop - 260 - bgimrwip 1cefhrwzdfil 2bdlpuvzabno 3dgiqtxdknp 4cgknpuyglo 5afqxzemo 6lortchiknp 7aefgkmnpyfi 8afioquzaghmn 9biltvwyhkn - 270 - egnsyzbefm 1bcdlsgmo 2eqrwydfhip 3mpzbo 4cdlnpuxghk 5dlmq rvhi 6egntwelmo 7aopqsuvabegmnp 8bdgkltvin 9aghrstwzbio - 280 - ahlnvxchkop 1dekvahi 2aehmfgilo 3cdhuvkn 4b demoqtafnp 5fgprtuydegmo 6bchilnsuxzacko 7bekmvwydln 8cfgpsybdg 9adilouzg - 290 - dgikloyaf 1akmnptwbegm 2 acdinsvcko 3beloqtaiklp 4aekmpswei 5alnpbcehkp 6emoracdi 7gkrwyzl 8bhopvabegh 9giltyil - 300 - efmtydlmo 1bdfh opqzchko 2bekrwycdn 3cfhkrtblm 4blnubcmno 5dgmqwxyfn 6npsuzdflo 7bcflxaeh 8bdgmqrvwycdhn 9enprudfi - 310 - fhoqvacghm 1ikqtvwyfhiln 2hknptuwybdf 3chilopxgkmno 4$cfhl$ 5efgnrstbei 6aclsuxabkp 7iklmrvcdnp 8gtuyei m 9cxaehm - 320 - bdlmvxyacfilp 1ghrsyeilm 2bfopvxzop 3bdiklrwyacdfh 4aefkmrsbgmo 5bcnopzacegk 6bdeiotwkn 7cfghudgilo 8abnoqsck 9degoqrxcdiknp - 330 - fkmpuwdeim 1cfhuvzghmp 2bektkl 3aegmnstuwyfm 4bdflxzcgkn 5bi motacfhklp 6afghkmprtg 7bfiquvxbcemo 8delmvxadln 9eknprzbo - 340 - hnoqxz 1klmrtxydi 2efgnwyzbeio 3abfhlpv zbch 4bimqxcdikp 5aefhpsuilm 6bcfnuvbegkn 7bimqtxyah 8chrstudfio 9fhquzah - 350 - klvwychilp 1cegmruwyd 2a ilvxbghm 3egklqwahn 4achkptuzm 5cdilnopscemno 6bgdf 7mntwydo 8abdnpqvacgop 9ekovacfinp - 360 - cefgpzbeio 1cdnpvzkm 2dgmrvacfnp 3cfhrsweil 4ovxbcegno 5klmrvyadikp 6cmpswdfimo 7dfiquzbghkmn 8diotxdfkp 9afhkmn stego - 370 - bfhiquxzko 1gkqydhlp 2agkswef 3cdfipqxzacgo 4dkrtailn 5acegmptuzbdeglm 6chosuxamnp 7gthip 8efn twzdglo 9cvxabkmno - 380 - eqtwci 1fhuwbfilo 2ahnpqzehkp 3bgilmovdfn 4ntuwyz 5asxzbcn 6bdemqvwcdfnp 7cefk mptubim 8bioqvzbem 9bgikowydfn - 390 - hkrstglo 1bcfhoqxzahmp 2dglmoqrvn 3afgkrsybdeio 4dhqsvzp 5bdeirvach 6chknybdg 7bdhlouzcgmp 8ilmqrtxacfik 9ampwdgil - 400 - dfnpqaknp 1eklmvwacfln 2fnprwfil 3svxzk 4klmoydiknp 5chmnsyfimo 6dlpqnop 7dqvyadk 8afhkmrtuwbgio 9bloquzen - 410 - egkqtvxfh 1fgnrsuzfgil 2abfilnosxachp 3orvxh klp 4efswbgm 5cfhiqsugno 6bdegilrtvychk 7hmpyzdf 8adfsuvagkno 9belrtwxychip - 420 - fghkszdeil 1anqxcghkno 2d iklqxhinp 3cknpuyegmo 4bcdopsvxzabekmp 5doxcdfl 6ersubfilo 7abdhlpsvbekno 8imqrwyap 9akmpswzbgl - 430 - bfh puvabn 1bgovyfl 2ackpzdim 3fhinmop 4belrvxhkp 5grsefgmo 6cdflouvzcm 7egiwyfhikln 8awblm 9fosvzacekmo - 440 - gilmrwydkl 1aehkmnydgl 2abciuxabceghn 3vxdhil 4guwimo 5achnopsuagk 6gikortvxikp 7aemrwdeflo 8dhqsvbgkn 9dglqwyadik - 450 - cfwzfi 1hilnpqzghmo 2otyahln 3cghmprszfl 4bfloqhmo 5bkorwxcklp 6fnrybefmo 7cpvxabg 8giklorwackn 9suwydgl - 460 - iluvzemnp 1bortwdhikp 2hmpzdeg 3acdlpuvhp 4eqrtvxdflp 5cekuybelm 6ahoqsuagh km 7bkltvxcd 8ceghmnwzbfl 9ahoxno - 470 - grvxykn 1ehkmpstuzl 2cipvcgkno 3bdgqvwahkl 4cghnrymo 5acfilosa chmp 6dkmqwxyhp 7aefgprsfgmo 8cdhpsxch 9begoqtvacfh - 480 - gkmuegm 1dhinxagkno 2iqtydhp 3efprwdio 4c dfpuaeghkmo 5kloqradln 6ehktuzefg 7novxzbghkp 8dgiktxycdil 9ctwelm - 490 - bdhnopsxch 1bdgikqxcdfnp 2acek

Krause's table of factors (1804) (reconstruction, D. Roegel, 2011)

50 wzfgo 3cnoqabcmn 4degmovyafhp 5kmnptuyo 6bfloqabcho 7elqrtxikl 8aceknswdfm 9hilpqsxmnp - 500 - ikotvwcf
kn 1aehkmntwyf 2cilnzaekm 3eimoryafik 4egkryzo 5bflqsuvhkmnp 6ltvdi 7ckrwbefl 8ioquxbemn 9dkmvxcdln
- 510 - anstyzd 1dnopvxcnop 2bgmqrxaik 3cmrstuzi 4cfhilnpquzeghk 5begiqvafhnp 6cfnptyegim 7fhiubcko 8bglmqw
ycdnp 9cfmrudefm - 520 - dilvxbch 1biltwafhil 2akpuwyblm 3afizacgkm 4owxl 5aegmrswzbdgi 6dlnqbemo 7deilot
xci 8cfgpyzgil 9abhpvxabehp - 530 - bgtvcfkln 1afgmtuzdelo 2anoqbcghp 3dklwyfh 4acehprwg 5bcluvcmno 6degk
moqwxhnp 7ghnyefim 8fhnuxzhkmop 9gklqvykn - 540 - aefpuyim 1aioqvabhn 2gvcfkn 3ehkntzbdf 4abdfhipsucn
op 5bgiqrtyafhi 6agkmntbeg 7dfilvbegkp 8movcfh 9cghruyegi - 550 - adiuvxzeg 1bdgltad 2acfghmsuym 3fnopqsve
hp 4eqrxck 5aemrtgl 6bdhinoqzabehmo 7egioaknp 8cfghkmpsudlo 9abilnoubko - 560 - bdqrwhknp 1afknubdgo 2cdp
quabcp 3eoycfin 4agnpswbefgl 5abdhlnoscmop 6emoyadhk 7aefnptbegi 8cdfilsxemno 9deikmrvxailnp - 570 - prtyefl
o 1chnqsuaegmn 2bikrvycdik 3amntubeilo 4flxbkn 5blmxydkn 6apruwbglo 7dfhlnpvehkmn 8bdmqtwyhp 9agkstefm
- 580 - flnsuxzbep 1demtvwcdlnp 2cegmnpsd 3dfipabcgmn 4beglqrvwfh 5epsubeg 6abfnxzgknp 7elorxadkl 8nlo 9acd
fipsabgmo - 590 - deikmvwacfin 1cfhkruybio 2cdhioqsaeh 3orvxycfknp 4cghrstwbdeo 5dfqxzbh 6egilmvyacdnp 7c
60 kmstwdgmo 8doagk 9imvxdhp - 600 - fgmprfilm 1abcloquzbc 2dgkvxydln 3gnpsweio 4flsuxno 5dilql 6acegknptuyz
gl 7bhlopxzaegn 8eiycklp 9afghkpswz - 610 - aclnsvxmp 1imrvwc 2eknwzimo 3noqsxagh 4bdgracdikn 5cehstwyzi 6b
dflnpsvxbehk 7bgkmvxh 8fhpszdg 9dlouzbghkm - 620 - begqtwxdhp 1hmnprsdlm 2acfhoeop 3bekltvi 4agkybefio 5a
coquahmo 6bgloqwyik 7aknswzem 8ahlvzceo 9bilmqcdhikl - 630 - mnybego 1bflnugop 2ertfhp 3efgnptwzbflmo
4dhiqsabeknp 5iloryfklp 6acegmtuybdlmo 7bdhlpszehnp 8bdkqrwxa 9acfmufo - 640 - cfhopabhm 1dkvwxdkl 2gkn
pdgi 3abhloehp 4boqvwilp 5fwbfgm 6adfilozabgn 7dgtahin 8eguwdfgm 9ahilpvco - 650 - belmowadlp 1aehkmrtbde
gi 2bfqxbckn 3dklwxdhn 4cfhkptugo 5hipqsvxaghkp 6dgmotvxfkp 7acfghmnzfl 8dlnpqsvbhp 9ilmvxahin - 660 - m
prtbdil 1bcdpzcegm 2iqdn 3apstyzefi 4bfnuxabmp 5dkmorwcdkn 6agmswio 7afioquvamo 8dirvwafil 9hknstuyef
- 670 - biosuxzeg 1bimqrwxchkl 2efghntzdel 3cqsucmp 4deilmotwfhlnp 5eknptybfgl 6achnvgp 7dkorvxyafil 8achms
wbim 9alnoqsxzbgkn - 680 - krwydkp 1efrtzd 2cdfhlqzgh 3emvdlp 4pstuefilm 5acinqsbho 6eoqycikp 7efmpsubdfm
8fhiaghmop 9bdgltan - 690 - aehmnzbe 1dhlsuvamno 2bioqtxya 3fgprdgil 4ablnqxabehmnop 5qxn 6kwzfmo 7dpqz
70 abg 8dilmotxyfp 9emnrymo - 700 - abdhqvzbgp 1egikqrxafhip 2ackmprudlo 3dfilveghn 4kmqvxyhkl 5acmpudeil 6c
hilqxabk 7dgmwcin 8krsuwbfgm 9afhipuvxcghmop - 710 - ekqychl 1hmstwzbdm 2dopuxzakn 3glmoqrtwyaklp 4ef
hmpswdegi 5blpuvacno 6otadnp 7cefhrzfl 8cdipsuzbghkp 9dgortadiknp - 720 - hnstweflm 1abdqzbce 2eiklmvwcdfk
3cfprwbgi 4inzbchno 5botvyf 6fgkstuzdegl 7achloqabo 8gkycdiln 9aceknpuwyefo - 730 - dfhpqszagm 1ilorhl 2psyf
m 3bdlnvzacgk 4giowydfi 5gkmtwzdilo 6cdfpsveghnp 7dilvxdi 8hktuybfio 9cqsvzep - 740 - giltvdfnp 1ansuyzbflo
2abdhnxgkno 3egkwxafhi 4efhruwdl 5cdilnvzbeko 6dekwkp 7cfghmntyzdgo 8ilnsxzcekmo 9bkmory - 750 - efgmprgi
1douzbchn 2degklqwcfl 3ckmptwbflm 4abcnpg 5beiloqrwxdfi 6eghmrwygil 7bcdinsbehkno 8iowci 9fnprbgilmo
- 760 - abnqghmp 1bkmtxya 2cfnsuwyzil 3bosbcgk 4bikradhkn 5cehprszgo 6bcnuvbego 7gowxdfh 8ahmnptdei 9cfhs
uzam - 770 - bgkmrtchn 1aprwbdm 2afpqsuzabcgm 3gkqtvycfi 4ghntdfglm 5dfilsuvxacekm 6egirtyhklp 7efhknstze
io 8afquabnp 9movcfip - 780 - cgnruyg 1aipqxabegmn 2bmoryfi 3acegrtb 4alpqbgko 5degqrwcdfin 6cksuwmo 7cfip
ghkmo 8bdkqwxfkln 9ahmrfgl - 790 - nqsak 1beoqtvwyhkn 2amnryegi 3adhopuxbgnop 4eklovhn 5npuyzgl 6adfil
80 noxckmnop 7xcf 8aefgkmrstzbel 9abcqsbegkop - 800 - iqvdf 1certuwbefm 2cdinoqvaegk 3dgmrtack 4cmtudelm 5fl
pxbp 6beilmvxcdfhik 7afptuzfgil 8bdhnouao 9degkmowal - 810 - afghknrstudfio 1ahnxaehop 2bkoqhinp 3cnsuwyde
4adiqxa 5dglotvwyac 6ehmptubdfl 7abclpuzcep 8gqtwcip 9ahmnpswbde - 820 - bcdfinpqvbe 1mqrwadiln 2cghknpr
zbg 3acquvzekn 4ixacdiknp 5cmnuyzbdm 6adfhovxp 7iklmxyahknp 8efptilm 9bfqaho - 830 - bdktyadfln 1agpf 2bc
hilnosxbcep 3eqrxilp 4acgknpsuydfo 5pxzagmo 6dgiqrwal 7aghpzefm 8fosxcem 9beioqcik - 840 - egtwyzbl 1ilnpsa
ghmp 2eikmqtap 3cfghtuflm 4acinpsuxabhp 5bdikovyl 6mnuwyemo 7afhnpvzkn 8delxycd 9fhtzbfgm - 850 - dilpu
zhkmn 1bdiotynp 2afkmpstyo 3bfnozach 4elmqtvwck 5fgknudfo 6achilqszbcm 7begovhn 8ghmnpstwl 9bdnomp
- 860 - eglmcfi 1efgnpszdgio 2adqsuxackmno 3ekrvwxcdhlp 4fkrwzbfm 5adnoqzegkp 6lmfln 7ehmswbdi 8fpsvxzc 9k
lmqvychn - 870 - efprudi 1bchiouvghk 2eikvwxfhnp 3fgkpyi 4bcilosehm 5degkqrtwxyikl 6fkmnrsudgimo 7ahiqsvb
no 8beowcfhk 9egnsyzefm - 880 - abchpcgn 1gmcf 2ekpryzl 3ailpqgo 4eklacdnp 5fktlm 6cdsvxzabh 7imrtdlnp 8ace
fghswzbeio 9bhpvcno - 890 - bdgirvxcdik 1acfhkpwl 2bdflnpzcen 3bgmadhknp 4fgnsuyfm 5afhilozabmop 6belowxy
90 cdhl 7wybgio 8dhioqubmop 9dgkqyafil - 900 - aceghknwybdel 1ciluaekmop 2bglqtadhl 3fwydego 4abcpqcehp 5ekl
motip 6ghnrtyfgo 7bdnukn 8bikortak 9acegntdflo - 910 - dhoghop 1ilmqrvwyainp 2mpsuwimo 3bdnbcehkno 4ekow
xyanp 5fmrdefim 6inqem 7beowxdh 8acefkprbe 9diqsvxzbco - 920 - bdorvfi 1cehswefgl 2bhilopsvco 3egotwxacfhik
p 4afhnyzbgl 5bcvxbchn 6klqrtxcdhinp 7cgkpwzbglm 8adinuxzabnp 9ilrvxykn - 930 - atwyfilo 1bfnoqvcgkp 2mqrv
wxahik 3chkmpdfi 4chlaghkmno 5bkmwxyah 6acmpi 7abhqzak 8delvdkln 9aefkprubdgio - 940 - cdouxagp 1degi
vwc 2achmwzem 3cdilnsuvgop 4iloqrtafi 5fmnrstyzeio 6bfiuvkn 7dkltdfhln 8ehkprtuel 9bcouvznp - 950 - bdiladikln
1acenswflm 2bfhnoqxzbegk 3eglqcin 4afhmrszbdgi 5clnquzcho 6bgimov 7acfgknpteilm 8abfhxcehm 9egkmtxydkl
- 960 - afgswygo 1puxbghp 2eikoyachln 3kmnpwf 4ahnsvxzcgkno 5glwxhkl 6aszbdo 7bnpquxacgkop 8ikltvxn 9cenw
yeglo - 970 - abciqeh 1bglvxycdfk 2fnryi 3ablbceghko 4kmrwyap 5aektuwzdfgi 6cdfuvek 7emdfkl 8fmrstuyzdgi 9h
lnszbek - 980 - degrtxh 1akmsg 2cfilvxcop 3gikltcfkl 4cehmswybegm 5choszaeo 6ilqracl 7efgmnpeg 8acdpubcekno
p 9delmqtwahnp - 990 - fgkrwgil 1bdhnopquehm 2korvxyfl 3gtubdfmo 4adnqcko 5klmvyadfh 6cekszbgl 7cdfhioz
bkn 8dgkmoqydfh 9ackmzdlm.

# Krause's table of factors (1804) (reconstruction, D. Roegel, 2011)

01 03 07 09 11 13 17 19 21 23 27 29 31 33 37 39 41 43 47 49 51 53 57 59 61 63 67 69 71 73 77 79 81 83 87 89 91 93 97 99
a b c d e f g h i k l m n φ p q r s t u v w x y z 𝔞 𝔟 𝔠 𝔡 𝔢 𝔣 𝔤 𝔥 𝔦 𝔨 𝔩 𝔪 𝔫 𝔬 𝔭

u 7.7 𝔣 7.11 𝔪 7.13 - 1 - h 7.17 i 11.11 φ 7.19 s 11.13 z 7.23 𝔠 13.13 𝔨 11.17 - 2 - b 7.29 d 11.19 g 7.31 i 13.17 t 13.19
w 11.23 y 7.37 𝔨 7.41 𝔩 17.17 𝔭 13.23 - 3 - a 7.43 h 11.29 k 17.19 m 7.47 r 11.31 s 7.7.7.49 z 19.19 𝔡 7.53 𝔣 13.29 𝔪 17.23 - 4 -
b 13.31 c 11.37 f 7.59 l 7.61 p 19.23 v 11.41 𝔠 7.67 𝔢 11.43 𝔥 13.37 𝔫 17.29 𝔬 7.71 - 5 - e 7.73 g 11.47 l 17.31 m 23.23 φ 13.41
q 7.7.11.77.49 v 19.29 w 7.79 y 13.43 𝔥 7.83 𝔦 11.53 𝔩 19.31 - 6 - e 13.47 k 7.89 m 17.37 p 7.7.13.91.49 u 11.59 𝔟 23.29
𝔡 11.61 𝔤 7.97 𝔩 13.53 𝔬 17.41 - 7 - b 19.37 c 7.101 f 23.31 i 7.103 n 17.43 p 11.67 u 7.107 𝔞 7.109 𝔟 13.59 𝔤 19.41 𝔥 11.71
𝔪 7.113 𝔫 13.61 𝔭 17.47 - 8 - b 11.73 g 19.43 φ 7.7.17.119.49 r 29.29 t 7.11.11.121.77 v 23.37 𝔠 11.79 𝔡 13.67 𝔩 7.127 𝔫 19.47
𝔭 29.31 - 9 - a 17.53 f 11.83 g 7.131 k 13.71 n 7.7.19.133.49 s 23.41 u 13.73 y 7.137 z 31.31 𝔢 7.139 𝔤 11.89 𝔩 23.43 - 10 -
a 7.11.13.143.91.77 b 17.59 c 19.53 l 13.79 p 17.61 s 7.149 x 7.151 𝔟 11.97 𝔢 29.37 𝔤 13.83 𝔥 23.47 𝔭 7.157 - 11 - e 11.101
i 19.59 l 7.7.23.161.49 φ 11.103 q 17.67 r 7.163 t 31.37 x 13.89 y 19.61 𝔠 7.167 𝔣 11.107 𝔦 7.13.13.169.91 𝔩 29.41 𝔭 11.109
- 12 - c 17.71 e 7.173 h 23.53 r 17.73 s 11.113 t 29.43 w 7.179 z 13.97 𝔟 7.181 𝔡 31.41 𝔢 19.67 - 13 - d 7.11.17.187.119.77
f 13.101 n 11.11.11.121 φ 31.43 p 7.191 q 13.103 s 17.79 u 19.71 v 7.193 x 23.59 𝔞 29.47 𝔠 37.37 𝔤 7.197 𝔨 19.73 𝔪 13.107
𝔫 7.199 𝔬 11.127 - 14 - b 23.61 e 17.83 g 13.109 i 7.7.29.203.49 r 11.131 x 31.47 𝔞 7.11.19.209.133.77 𝔠 13.113 𝔣 7.211 - 15 -
a 19.79 c 11.137 f 17.89 g 37.41 h 7.7.31.217.49 m 11.139 p 29.53 r 23.67 t 7.13.17.221.119.91 z 7.223 𝔢 11.11.13.143.121
𝔣 19.83 𝔩 7.227 𝔪 37.43 - 16 - b 7.229 n 7.233 φ 23.71 q 11.149 s 31.53 u 17.97 v 13.127 z 11.151 𝔢 7.239 𝔤 23.73 𝔥 41.41
𝔨 7.241 𝔪 19.89 - 17 - b 13.131 e 29.59 g 17.101 l 11.157 m 7.13.19.247.133.91 q 37.47 v 17.103 x 7.251 𝔞 41.43 𝔠 29.61
𝔡 7.11.23.253.161.77 𝔥 13.137 𝔫 11.163 𝔭 7.257 - 18 - c 13.139 f 7.7.37.259.49 g 23.79 h 17.107 m 31.59 p 11.167 r 7.263
s 19.97 u 43.43 w 17.109 y 11.13.13.169.143 𝔦 7.269 𝔪 31.61 𝔬 7.271 - 19 - b 11.173 d 23.83 h 19.101 i 17.113 l 41.47
p 13.149 q 7.277 s 29.67 x 19.103 z 37.53 𝔞 13.151 𝔟 7.281 𝔠 11.179 𝔥 7.283 𝔪 11.181 - 20 - d 7.7.41.287.49 i 43.47
k 7.17.17.289.119 φ 19.107 r 13.157 t 23.89 v 7.293 x 11.11.17.187.121 y 29.71 𝔡 19.109 𝔣 31.67 𝔫 7.13.23.299.161.91
- 21 - a 11.191 c 7.7.43.301.49 g 29.73 h 13.163 k 11.193 t 19.113 u 7.307 y 17.127 𝔟 11.197 𝔡 13.167 𝔢 41.53 𝔣 7.311
𝔦 37.59 𝔩 11.199 𝔪 7.313 𝔬 13.13.13.169 - 22 - a 31.71 d 47.47 h 7.317 l 17.131 n 23.97 φ 7.11.29.319.203.77 u 13.173
x 37.61 z 7.17.19.323.133.119 𝔞 31.73 𝔤 43.53 𝔪 29.79 𝔭 11.11.19.209.121 - 23 - b 7.7.47.329.49 g 7.331 i 11.211 k 23.101
l 13.179 m 17.137 w 13.181 y 7.337 𝔞 17.139 𝔠 23.103 𝔨 7.11.31.341.217.77 - 24 - a 7.7.7.7.343.49 c 29.83 f 19.127 h 41.59
m 7.347 n 11.13.17.221.187.143 s 7.349 u 31.79 w 11.223 z 23.107 𝔡 7.353 𝔤 37.67 𝔦 13.191 𝔩 19.131 𝔪 47.53 𝔬 11.227 -
25 - a 41.61 c 23.109 d 13.193 f 7.359 h 11.229 l 7.19.19.361.133 φ 17.149 p 43.59 z 13.197 𝔞 11.233 𝔟 17.151 𝔠 7.367
𝔢 31.83 𝔥 29.89 𝔨 13.199 𝔬 7.7.53.371.49 𝔭 23.113 - 26 - b 19.137 e 7.373 k 43.61 l 37.71 m 11.239 q 7.13.29.377.203.91
r 19.139 v 11.241 w 7.379 𝔠 17.157 𝔥 7.383 - 27 - a 37.73 g 11.13.19.247.209.143 k 7.389 p 7.17.23.391.161.119 s 13.211
t 41.67 y 31.89 z 11.251 𝔡 17.163 𝔢 47.59 𝔤 7.397 𝔦 11.11.23.253.121 - 28 - c 7.401 d 53.53 f 29.97 i 7.13.31.403.217.91
l 11.257 n 19.149 q 17.167 u 7.11.37.407.259.77 𝔞 7.409 𝔟 47.61 𝔠 19.151 𝔢 13.13.17.221.169 𝔥 43.67 𝔪 7.7.59.413.49
𝔫 11.263 𝔭 13.223 - 29 - e 41.71 i 23.127 k 37.79 m 29.101 φ 7.419 r 17.173 t 7.421 v 13.227 y 11.269 𝔣 13.229 𝔥 11.271
𝔦 19.157 𝔨 29.103 𝔩 7.7.61.427.49 𝔫 41.73 - 30 - c 31.97 f 23.131 g 7.431 m 13.233 n 7.433 s 17.179 t 11.277 w 43.71
y 7.19.23.437.161.133 𝔡 37.83 𝔢 7.439 𝔣 17.181 𝔪 11.281 𝔬 19.163 - 31 - a 7.443 b 29.107 c 13.239 f 11.283 l 53.59 n 31.101
φ 13.241 q 43.73 s 7.449 u 47.67 v 23.137 x 7.11.41.451.287.77 z 29.109 𝔢 19.167 𝔤 11.17.17.289.187 𝔫 31.103 𝔬 23.139
𝔭 7.457 - 32 - e 13.13.19.247.169 k 11.293 l 7.461 φ 53.61 q 41.79 r 7.463 t 17.191 𝔞 13.251 𝔠 7.467 𝔣 29.113 𝔥 17.193
𝔦 7.7.67.469.49 𝔨 19.173 𝔩 11.13.23.299.253.143 𝔫 37.89 - 33 - e 7.11.43.473.301.77 g 31.107 p 47.71 r 13.257 u 17.197
w 7.479 𝔟 7.13.37.481.259.91 𝔣 11.307 𝔤 31.109 𝔦 17.199 𝔬 43.79 - 34 - a 19.179 b 41.83 d 7.487 h 13.263 i 11.311 l 23.149
n 47.73 p 7.491 q 19.181 s 11.313 v 7.17.29.493.203.119 𝔢 23.151 𝔤 7.7.71.497.49 𝔥 59.59 𝔨 11.317 𝔫 7.499 𝔬 13.269 - 35
- b 31.113 d 11.11.29.319.121 i 7.503 k 13.271 v 53.67 w 11.17.19.323.209.187 𝔞 7.509 𝔠 43.83 𝔣 7.7.73.511.49 𝔨 17.211
𝔩 37.97 𝔭 59.61 - 36 - a 13.277 e 23.157 h 7.11.47.517.329.77 m 19.191 r 11.331 t 7.521 u 41.89 w 13.281 z 7.523 𝔟 19.193
𝔤 13.283 𝔦 29.127 𝔩 7.17.31.527.217.119 - 37 - b 7.23.23.529.161 c 11.337 f 47.79 i 61.61 n 7.13.41.533.287.91 p 37.101
s 19.197 u 23.163 v 11.11.31.341.121 x 13.17.17.289.221 𝔞 53.71 𝔢 7.7.7.11.539.343.77.49 𝔥 19.199 𝔨 7.541 𝔪 17.223
𝔭 29.131 - 38 - d 13.293 e 37.103 g 11.347 l 43.89 m 7.547 q 11.349 r 23.167 x 7.19.29.551.203.133 y 17.227 𝔠 53.73
𝔡 7.7.79.553.49 𝔦 11.353 𝔨 13.13.23.299.169 𝔫 17.229 𝔭 7.557 - 39 - a 47.83 f 7.13.43.559.301.91 p 31.127 r 7.563 u 11.359
w 59.67 y 37.107 z 17.233 𝔡 11.19.19.361.209 𝔢 29.137 𝔣 41.97 𝔤 23.173 𝔦 7.569 𝔪 13.307 𝔬 7.571 - 40 - d 19.211 n 29.139
φ 37.109 p 11.367 q 7.577 s 13.311 z 31.131 𝔞 17.239 𝔟 7.7.83.581.49 𝔠 13.313 𝔥 7.11.53.583.371.77 𝔨 61.67 𝔬 17.241 - 41 -
b 11.373 d 7.587 g 23.179 i 13.317 k 7.19.31.589.217.133 r 41.101 t 11.13.29.377.319.143 v 7.593 𝔞 23.181 𝔠 11.379 𝔡 43.97
𝔥 37.113 𝔦 47.89 𝔨 53.79 𝔩 59.71 𝔫 7.599 𝔭 13.17.19.323.247.221 - 42 - c 7.601 f 11.383 k 41.103 p 19.223 t 31.137 u 7.607
𝔟 17.251 𝔣 7.13.47.611.329.91 𝔤 11.389 𝔪 7.613 - 43 - a 11.17.23.391.253.187 b 13.331 c 59.73 d 31.139 f 19.227 h 7.617
i 29.149 n 61.71 φ 7.619 s 43.101 v 19.229 z 7.7.89.623.49 𝔟 11.397 𝔠 17.257 𝔤 29.151 𝔥 13.337 𝔨 41.107 𝔫 23.191 𝔭 53.83 -
44 - b 7.17.37.629.259.119 e 11.401 g 7.631 l 19.233 m 43.103 φ 11.13.31.403.341.143 q 23.193 w 61.73 y 7.7.7.13.637.
343.91.49 𝔠 41.109 𝔡 17.263 𝔣 11.11.37.407.121 𝔨 7.641 𝔩 67.67 𝔭 11.409 - 45 - a 7.643 e 13.347 m 7.647 n 23.197 p 13.349
r 19.239 s 7.11.59.649.413.77 w 29.157 y 47.97 𝔡 7.653 𝔢 17.269 𝔣 23.199 𝔤 19.241 𝔩 13.353 - 46 - a 43.107 c 17.271 d 11.419
f 7.659 h 31.149 l 7.661 n 11.421 φ 41.113 z 59.79 𝔟 13.359 𝔠 7.23.29.667.203.161 𝔥 31.151 𝔨 43.109 𝔫 13.19.19.361.247
𝔬 7.11.61.671.427.77 𝔭 37.127 - 47 - d 17.277 e 7.673 g 53.89 l 29.163 q 7.677 r 11.431 t 47.101 w 7.7.97.679.49
x 67.71 𝔞 11.433 𝔠 19.251 𝔡 13.367 𝔣 17.281 𝔥 7.683 - 48 - c 11.19.23.437.253.209 e 17.283 h 61.79 k 7.13.53.689.371.91
m 11.439 p 7.691 r 47.103 s 29.167 t 37.131 u 13.373 w 23.211 y 43.113 𝔟 31.157 𝔢 11.443 𝔤 7.17.41.697.287.119 𝔦 19.257
𝔪 67.73 𝔬 59.83 - 49 - a 13.13.29.377.169 c 7.701 f 17.17.17.289 i 7.19.37.703.259.133 l 13.379 q 11.449 u 7.7.101.707.49
z 11.11.41.451.121 𝔞 7.709 𝔤 13.383 𝔥 17.293 𝔪 7.23.31.713.217.161 𝔬 19.263 - 50 - g 29.173 l 11.457 m 47.107 φ 7.719
r 71.71 t 7.7.103.721.49 w 31.163 x 13.389 𝔞 61.83 𝔠 37.137 𝔡 11.461 𝔦 13.17.23.391.299.221 𝔩 7.727 𝔫 11.463 - 51 -
e 19.269 g 7.17.43.731.301.119 k 47.109 m 23.223 n 7.733 p 11.467 r 53.97 s 37.139 u 19.271 y 7.11.67.737.469.77

# Krause's table of factors (1804) (reconstruction, D. Roegel, 2011)

z 13.397 𝔢 7.739 𝔣 31.167 𝔦 71.73 𝔪 29.179 - 52 - a 7.743 b 11.11.43.473.121 c 41.127 f 13.401 h 17.307 i 23.227
q 13.13.31.403.169 s 7.7.107.749.49 u 29.181 v 59.89 x 7.751 𝔞 19.277 𝔟 23.229 𝔠 11.479 𝔥 17.311 𝔪 11.13.37.481.407.143
𝔫 67.79 𝔭 7.757 - 53 - e 47.113 g 13.409 i 17.313 l 7.761 m 73.73 q 19.281 r 7.7.109.763.49 w 53.101 x 11.487 y 23.233
𝔞 31.173 𝔠 7.13.59.767.413.91 𝔡 41.131 𝔣 19.283 𝔦 7.769 𝔩 17.317 - 54 - a 11.491 e 7.773 k 11.17.29.493.319.187 m 61.89
t 13.419 w 7.19.41.779.287.133 y 53.103 z 43.127 𝔟 7.11.71.781.497.77 𝔢 13.421 𝔩 11.499 𝔪 17.17.19.323.289 𝔬 23.239
55 - 55 - d 7.787 f 37.149 𝔭 11.503 p 7.7.113.791.49 q 29.191 s 23.241 u 31.179 v 7.13.61.793.427.91 z 67.83 𝔟 19.293
𝔤 7.797 𝔥 37.151 𝔫 7.17.47.799.329.119 𝔬 29.193 𝔭 11.509 - 56 - b 13.431 d 71.79 e 31.181 g 41.137 i 7.11.73.803.511.77
l 17.331 m 13.433 𝔭 43.131 𝔞 7.809 𝔡 53.107 𝔣 7.811 𝔟 13.19.23.437.299.247 𝔥 11.11.47.517.121 𝔭 41.139 - 57 - c 13.439
f 29.197 h 7.19.43.817.301.133 k 59.97 m 17.337 n 11.521 t 7.821 w 11.523 y 13.443 z 7.823 𝔟 73.79 𝔡 29.199 𝔢 23.251
𝔣 53.109 𝔩 7.827 𝔬 11.17.31.527.341.187 - 58 - b 7.829 d 37.157 h 11.23.23.529.253 n 7.7.7.17.833.343.119.49 𝔭 19.307
p 13.449 𝔞 11.13.41.533.451.143 𝔢 7.839 𝔥 7.29.29.841.203 𝔪 43.137 𝔫 71.83 𝔭 17.347 - 59 - d 19.311 e 23.257 g 61.97
i 31.191 m 7.7.11.11.847.539.121.77.49 𝔭 17.349 r 13.457 t 19.313 v 11.541 x 7.23.37.851.259.161 y 59.101 𝔞 67.89
60 𝔠 47.127 𝔡 7.853 𝔣 43.139 𝔦 31.193 𝔩 53.113 𝔫 13.461 𝔭 7.857 - 60 - a 17.353 f 7.859 g 11.547 h 13.463 k 19.317
n 37.163 r 7.863 u 23.263 y 73.83 z 11.19.29.551.319.209 𝔡 13.467 𝔣 59.103 𝔦 7.11.79.869.553.77 𝔬 7.13.67.871.469.91 -
61 - b 17.359 c 31.197 d 41.149 h 29.211 l 11.557 p 17.19.19.361.323 q 7.877 u 11.13.43.559.473.143 x 47.131 z 61.101
𝔟 7.881 𝔠 31.199 𝔤 37.167 𝔥 7.883 𝔥 23.269 𝔪 41.151 𝔫 11.563 - 62 - d 7.887 k 7.7.127.889.49 l 13.479 𝔭 23.271 q 17.367
r 79.79 v 7.19.47.893.329.133 w 13.13.37.481.169 y 11.569 𝔥 11.571 𝔦 61.103 𝔩 19.331 𝔫 7.29.31.899.217.203 - 63 -
c 7.17.53.901.371.119 f 59.107 h 71.89 n 13.487 r 17.373 t 11.577 u 7.907 𝔡 23.277 𝔣 7.911 𝔦 13.491 𝔪 7.11.83.913.581.77
- 64 - a 37.173 b 19.337 c 43.149 d 13.17.29.493.377.221 f 11.11.53.583.121 h 7.7.131.917.49 n 59.109 𝔭 7.919 p 41.157
q 47.137 s 17.379 x 11.587 z 7.13.71.923.497.91 𝔞 23.281 𝔟 29.223 𝔤 11.19.31.589.341.209 𝔥 13.499 𝔫 43.151 𝔬 73.89
65 𝔭 67.97 - 65 - b 7.929 d 23.283 e 17.383 g 7.7.7.19.931.343.133.49 k 11.593 l 61.107 𝔭 47.139 q 13.503 r 31.211 x 79.83
y 7.937 𝔦 29.227 𝔥 7.941 𝔩 11.599 𝔫 19.347 - 66 - a 7.23.41.943.287.161 e 11.601 f 17.389 g 13.509 k 37.179 m 7.947
n 19.349 r 29.229 s 7.13.73.949.511.91 t 17.17.23.391.289 u 61.109 𝔟 59.113 𝔡 7.953 𝔣 11.607 𝔦 41.163 𝔬 37.181 - 67 -
c 19.353 f 7.7.137.959.49 i 11.13.47.611.517.143 l 7.31.31.961.217 n 53.127 q 23.293 s 11.613 u 17.397 v 43.157 x 29.233
𝔟 67.101 𝔠 7.967 𝔢 13.521 𝔥 11.617 𝔬 7.971 𝔭 13.523 - 68 - d 11.619 e 7.7.139.973.49 g 17.401 i 19.359 q 7.977 t 41.167
v 13.17.31.527.403.221 w 7.11.89.979.623.77 y 19.19.19.361 𝔣 13.23.23.529.299 𝔟 7.983 𝔥 71.97 𝔩 83.83 𝔫 61.113 - 69 -
a 67.103 f 31.223 h 11.17.37.629.407.187 k 7.23.43.989.301.161 m 13.13.41.533.169 n 29.239 p 7.991 r 11.631 s 53.131
70 w 17.409 𝔢 19.367 𝔤 7.997 𝔩 29.241 - 70 - b 47.149 c 7.7.11.13.1001.637.539.143.91.77.49 d 43.163 i 7.17.59.1003.413.119
n 79.89 𝔭 13.541 p 31.227 u 7.19.53.1007.371.133 v 11.641 z 23.307 𝔞 7.1009 𝔟 37.191 𝔢 11.643 𝔟 73.97 𝔥 19.373 𝔪 7.1013
𝔫 41.173 𝔬 47.151 𝔭 31.229 - 71 - e 13.547 g 11.647 k 17.419 𝔭 7.1019 q 11.11.59.649.121 r 37.193 t 7.1021 w 23.311
x 17.421 𝔞 13.19.29.551.377.247 𝔠 67.107 𝔡 71.101 𝔟 43.167 𝔦 11.653 𝔩 7.13.79.1027.553.91 𝔭 23.313 - 72 - a 19.379 g 7.1031
k 31.233 n 7.1033 r 13.557 u 11.659 y 7.17.61.1037.427.119 z 53.137 𝔟 13.13.43.559.169 𝔡 11.661 𝔢 7.1039 𝔣 19.383 𝔤 29.251
𝔩 37.197 𝔪 23.317 - 73 - a 7.7.149.1043.49 b 67.109 f 71.103 h 13.563 l 17.431 p 11.23.29.667.319.253 q 41.179 s 7.1049
x 7.1051 z 17.433 𝔞 37.199 𝔟 53.139 𝔢 73.101 𝔤 47.157 𝔟 11.11.61.671.121 𝔥 83.89 𝔪 19.389 𝔬 13.569 𝔭 7.7.151.1057.49 -
74 - b 11.673 d 31.239 i 41.181 k 13.571 l 7.1061 m 17.19.23.437.391.323 q 43.173 r 7.1063 t 11.677 w 29.257 𝔞 17.439
75 𝔠 7.11.97.1067.679.77 𝔡 31.241 𝔦 7.1069 𝔫 59.127 - 75 - a 13.577 e 7.29.37.1073.259.203 f 11.683 h 73.103 n 17.443 s 19.397
w 7.13.83.1079.581.91 𝔟 7.23.47.1081.329.161 𝔡 67.113 𝔤 11.13.53.689.583.143 𝔬 71.107 - 76 - a 11.691 d 7.1087 f 23.331
h 19.401 l 29.263 n 13.587 𝔭 17.449 p 7.1091 v 7.1093 x 13.19.31.589.403.247 z 47.163 𝔞 79.97 𝔟 11.17.41.697.451.187
𝔤 7.1097 𝔫 7.7.157.1099.49 𝔬 43.179 - 77 - d 13.593 e 11.701 i 7.1103 m 59.131 𝔭 11.19.37.703.407.209 q 71.109 t 61.127
v 23.337 𝔞 7.1109 𝔠 17.457 𝔡 19.409 𝔣 7.11.101.1111.707.77 𝔟 31.251 𝔦 43.181 𝔥 13.599 𝔭 11.709 - 78 - a 29.269 c 37.211
e 73.107 f 13.601 h 7.1117 n 41.191 p 17.461 s 11.23.31.713.341.253 t 7.19.59.1121.413.133 u 47.167 y 29.271 z 7.1123
𝔡 17.463 𝔩 7.7.7.23.1127.343.161.49 𝔪 13.607 𝔬 53.149 - 79 - b 7.1129 d 11.719 f 41.193 i 89.89 n 7.11.103.1133.721.77
q 17.467 s 13.13.47.611.169 x 73.109 z 19.419 𝔟 31.257 𝔠 13.613 𝔢 7.17.67.1139.469.119 𝔤 79.101 𝔟 23.347 𝔥 7.7.163.1141.49
80 𝔪 61.131 𝔬 11.727 𝔭 19.421 - 80 - b 53.151 i 13.617 k 71.113 l 23.349 m 7.31.37.1147.259.217 𝔭 29.277 r 11.17.43.731.
473.187 t 13.619 v 83.97 x 7.1151 𝔞 11.733 𝔡 7.1153 𝔣 41.197 𝔦 59.137 𝔭 7.13.89.1157.623.91 - 81 - c 11.11.67.737.121
f 7.19.61.1159.427.133 h 23.353 m 11.739 n 47.173 p 79.103 r 7.1163 s 17.479 u 29.281 w 31.263 y 41.199 𝔢 11.743
𝔣 13.17.37.629.481.221 𝔦 7.7.167.1169.49 𝔩 19.431 𝔬 7.1171 - 82 - a 59.139 b 13.631 c 29.283 f 43.191 l 19.433 q 7.11.
107.1177.749.77 u 73.113 v 37.223 x 23.359 z 11.751 𝔟 7.1181 𝔤 17.487 𝔟 7.7.13.13.1183.637.169.91.49 𝔭 43.193 - 83 -
b 19.19.23.437.361 d 7.1187 i 53.157 k 7.29.41.1189.287.203 l 11.757 𝔭 13.641 q 31.269 r 19.439 t 17.491 v 7.1193 x 61.137
y 13.643 𝔡 11.761 𝔟 17.17.29.493.289 𝔦 83.101 𝔫 7.11.109.1199.763.77 𝔭 37.227 - 84 - a 31.271 c 7.1201 e 13.647 f 47.179
g 19.443 p 11.13.59.767.649.143 r 23.367 u 7.17.71.1207.497.119 w 79.107 y 11.769 𝔡 43.197 𝔢 37.229 𝔣 7.7.173.1211.49
85 𝔤 61.139 𝔦 17.499 𝔩 13.653 𝔪 7.1213 𝔬 29.293 - 85 - b 11.773 c 47.181 d 67.127 h 7.1217 n 19.449 𝔭 7.23.53.1219.371.161
u 83.103 v 17.503 x 43.199 z 7.1223 𝔟 13.659 𝔠 11.19.41.779.451.209 𝔤 23.373 𝔥 31.277 𝔪 11.11.71.781.121 𝔫 13.661 - 86 -
b 7.1229 e 79.109 g 7.1231 i 37.233 𝔭 89.97 q 53.163 v 41.211 w 17.509 x 11.787 y 7.1237 𝔡 13.23.29.667.377.299 𝔦 19.457
𝔥 7.17.73.1241.511.119 - 87 - a 7.11.113.1243.791.77 e 31.281 g 23.379 k 11.13.61.793.671.143 m 7.29.43.1247.301.203
s 7.1249 u 13.673 y 19.461 𝔟 11.797 𝔡 7.7.179.1253.49 𝔢 31.283 𝔣 67.131 𝔩 11.17.47.799.517.187 𝔪 59.149 𝔬 19.463 - 88
- a 13.677 d 23.383 f 7.1259 l 7.13.97.1261.679.91 𝔭 11.11.73.803.121 s 37.239 v 53.167 x 17.521 𝔠 7.7.181.1267.49
𝔢 19.467 𝔤 13.683 𝔟 83.107 𝔪 17.523 𝔬 7.31.41.1271.287.217 𝔭 11.809 - 89 - b 29.307 d 59.151 e 7.19.67.1273.469.133
g 37.241 i 11.811 l 79.113 q 7.1277 t 23.389 w 7.1279 x 13.13.53.689.169 y 17.17.31.527.289 𝔣 47.191 𝔟 7.1283 𝔦 13.691
90 𝔥 11.19.43.817.473.209 𝔩 89.101 𝔫 17.23.23.529.391 - 90 - g 71.127 h 29.311 k 7.1289 n 11.821 p 7.1291 t 83.109 w 11.823
z 13.17.41.697.533.221 𝔡 47.193 𝔢 43.211 𝔣 29.313 𝔤 7.1297 𝔦 31.293 𝔩 61.149 𝔬 11.827 - 91 - a 19.479 c 7.1301 f 13.701
h 11.829 i 7.1303 n 23.397 q 13.19.37.703.481.247 s 41.223 u 7.1307 𝔞 7.7.11.17.1309.833.539.187.119.77.49 𝔟 89.103
𝔠 53.173 𝔤 67.137 𝔪 7.13.101.1313.707.91 𝔫 29.317 𝔬 17.541 - 92 - e 61.151 g 13.709 k 23.401 m 11.839 𝔭 7.1319 t 7.1321

v 11.29.29.841.319 w 19.487 y 47.197 𝔞 59.157 𝔠 13.23.31.713.403.299 𝔡 73.127 𝔣 37.251 𝔩 7.1327 𝔭 17.547 - 93 - a 71.131
c 41.227 f 67.139 g 7.11.11.11.1331.847.121.77 m 19.491 n 7.31.43.1333.301.217 t 13.719 w 47.199 y 7.7.191.1337.49 z 11.
23.37.851.407.253 𝔟 17.19.29.551.493.323 𝔢 7.13.103.1339.721.91 𝔤 83.113 𝔦 11.853 𝔩 41.229 - 94 - a 7.17.79.1343.553.119
c 23.409 d 97.97 l 11.857 s 7.19.71.1349.497.133 u 11.859 v 13.727 x 7.7.193.1351.49 𝔠 17.557 𝔟 19.499 𝔣 53.179 𝔫 11.863
𝔭 7.23.59.1357.413.161 - 95 - b 13.17.43.731.559.221 d 37.257 g 31.307 k 89.107 l 7.1361 m 13.733 r 7.29.47.1363.329.203 95
w 41.233 x 19.503 y 11.11.79.869.121 𝔞 73.131 𝔠 7.1367 𝔡 17.563 𝔣 61.157 𝔟 11.13.67.871.737.143 𝔦 7.37.37.1369.259 𝔩 43.223
𝔫 53.181 𝔭 29.331 - 96 - c 13.739 e 7.1373 g 59.163 p 23.419 r 31.311 t 11.877 w 7.7.197.1379.49 y 13.743 𝔟 7.1381
𝔡 19.509 𝔢 17.569 𝔦 23.421 𝔪 11.881 - 97 - a 89.109 b 31.313 c 17.571 d 7.19.73.1387.511.133 f 11.883 l 71.137 n 37.263
p 7.13.107.1391.749.91 v 7.7.199.1393.49 x 11.887 z 43.227 𝔞 13.751 𝔢 29.337 𝔤 7.11.127.1397.889.77 𝔫 7.1399 𝔬 97.101
𝔭 41.239 - 98 - d 17.577 i 7.23.61.1403.427.161 k 11.19.47.893.517.209 l 31.317 r 13.757 t 43.229 w 59.167 𝔞 7.1409 𝔠 71.139
𝔣 7.17.83.1411.581.119 𝔟 41.241 𝔩 11.29.31.899.341.319 𝔫 13.761 𝔭 19.521 - 99 - e 11.17.53.901.583.187 f 23.431 g 47.211
h 7.13.109.1417.763.91 p 19.523 s 61.163 t 7.7.7.29.1421.343.203.49 w 37.269 y 23.433 z 7.1423 𝔡 13.13.59.767.169
𝔣 11.907 𝔤 17.587 𝔦 67.149 𝔩 7.1427 𝔪 97.103 𝔬 13.769.