DE NVMERIS PRIMIS VALDE MAGNIS

Auctore

L. EVLERO.

Vix vllus reperietur Geometra, qui non, ordinem numerorum primorum inueſtigando, haud parum temporis inutiliter conſumſerit: videtur enim lex, qua numeri primi progrediuntur, in Arithmetica aeque abſtruſae eſſe indaginis, atque in Geometria circuli quadratura: ac ſi huius indagatio pro deſperata eſt habenda, non leuiores adſunt rationes, quae et ordinis, quo numeri primi ſe inuicem ſequuntur, cognitionem nos in perpetuum fugere perſuadent. Cum deinde etiam circuli quadratura, quamuis innoteſceret, vix quicquam vtilitatis allatura perhibeatur, eodem iure negare licebit, ex ordine numerorum primorum perſpecto vllum vſum eſſe redundaturum. Verum tamen nemo facile dubitabit, quin methodus ipſa, quae nos vel ad circuli quadraturam, vel ad legem progreſſionis numerorum primorum manuduceret, quoniam hae res tam diu fruſtra ſunt anquiſitae, eximium vſum ſit praeſtatura, propterea quod maxima impedimenta, quibus hae inueſtigationes adhuc fuerunt implicatae, feliciter ſuperauerit; ita vt inde omni iure ſumma ſubſidia per totam Matheſin nobis polliceri poſſemus. Haec ideo monenda duxi, ne quis eos, qui forte in hoc studio desudauerint, etiamsi operam perdiderint, reprehendendos censeat. Ac profecto natura numerorum primorum, cum ex iis modo tam admirabili omnes numeri componantur, per se praeclarissima videtur, et quo magis adhuc in proprietates, quibus sunt praeditae, penetrare licuit, eo magis haec doctrina digna censeri debet, cui excolendae plus operae tribuatur, quam nunc quidem plerumque fieri solet. In hoc autem studii genere inprimis excelluit acutissimus quondam *Fermatius*, cui plurimae insignes numerorum proprietates acceptae sunt referendae; neque parum est dolendum, quod eius scripta post mortem ita interciderint, vt plurimorum theorematum demonstrationes, quas se adinuenisse asseverauerat, adhuc nobis sint ignotae. Hic perspicacissimus vir in doctrina numerorum primorum etiam non mediocriter laborauit, atque problema se dignissimum olim *Wallisio* proposuerat, quo modum requirebat, numerum primum dato quouis numero maiorem assignandi. Credebat quidem *Fermatius*, se huius problematis solutionem in potestate habere, dum affirmauerat, omnes numeros in hac forma $2^n + 1$ contentos, si quidem exponens n ipse fuerit potestas binarii, esse numeros primos. Verum tamen eo erat candore, vt negaret, se huius asserti demonstrationem habere, etiamsi de eius veritate minime dubitaret. Perspicuum autem est, si haec forma $2^n + 1$, sumendo pro n quasvis binarii potestates, semper numeros primos exhiberet, problema propositum perfecte fore solutum. Quocunque enim numero proposito, non solum vna, sed innumerabiles potestates bina-

binarii assignari poterunt, quae loco exponentis n positae, praebiturae sint potestates 2^n dato illo numero maiores, ad quas si vnitas adiiceretur, haberentur vtique totidem numeri primi dato illo numero maiores. Hanc autem regulam a *Fermatio* prolatam veritati non esse consentaneam, iam ante plures annos animaduerti. Cum enim pro omnibus casibus inter centena millia subsistentibus satisfaceret, qui sunt:

$$2^1+1=3;\ 2^2+1=5;\ 2^4+1=17;\ 2^8+1=257;\ 2^{16}+1=65537$$

statim sequentem casum $2^{32}+1=4294967297$ non esse primum inueni, sed diuisibilem per numerum 641. Quare cum etiam de sequentibus maioribus numeris, ex hac formula natis, incerti simus, vtrum sint primi, nec ne? hinc nihil plane adiumenti consequimur ad problema memoratum soluendum. Ac primo quidem nullum est dubium, quin proposito numero quantumuis magno, infiniti adeo existant numeri primi illo maiores; postquam iam ab Euclide est demonstratum, omnium numerorum primorum multitudinem esse infinitam; etiamsi, vt ego ostendi, haec numerorum primorum multitudo se habeat ad multitudinem omnium prorsus numerorum, vt vnitas ad infinitum, seu potius, vt logarithmus numeri infiniti ad ipsum hunc numerum infinitum, quod posterius infinitum maius est, quam potestas quantumuis magna illius infiniti. Solutionis quidem huius problematis compotes fieremus, si loco formulae 2^n+1 aliam formulam indefinitam detegere liceret, quae nonnisi numeros primos complecteretur; sed etiamsi fortasse talis reperiatur, quae vel centum numeros primos suppeditaret, tamen ei aeque parum confidere possemus pro sequentibus, nisi forte, quod autem vix est expectandum, firma demonstratio exhiberi queat. Nulla certe progressio algebraica datur, cuius omnes plane termini in infinitum crescentes futuri sint numeri primi. Sumto enim termino quocunque, inter sequentes semper infiniti termini eiusdem seriei assignari poterunt, quae omnes per illum diuidi queant, quod Theorema ita demonstro:

Theorema.

Nulla datur progressio algebraica, cuius omnes termini sint numeri primi.

Demonstratio.

Cum progressio sit algebraica, posito eius termino indici x respondente $= X$, erit:

$X = \alpha + \beta x + \gamma x^2 + \delta x^3 + \varepsilon x^4 + \zeta x^5 + \eta x^6 +$ etc.

Posito ergo termino indici a respondente $= A$, vt sit

$A = \alpha + \beta a + \gamma a^2 + \delta a^3 + \varepsilon a^4 + \zeta a^5 + \eta a^6 +$ etc.

si capiatur $x = nA + a$, fiet terminus isti indici respondens X vtique per A diuisibilis. Omnes ergo progressionis propositae termini, qui indicibus in hac forma $nA + a$ contentis respondent, non erunt numeri primi, neque ergo vlla huiusmodi progressio meros numeros primos complectetur. Q. E. D.

Verum etiamsi non omnes termini huiusmodi progressionis sint numeri primi, problemati tamen satisfieri possit, si modo inter eos infiniti dentur numeri primi, quorum indices certo quodam modo dignoscere lice-

liceret; veluti si eiusmodi daretur progressio, cuius omnes termini, quorum indices sunt numeri primi, ipsi essent numeri primi. Sed hoc modo quaerenda esset eiusmodi functio ipsius x, quae, quoties x fuerit numerus primus, ipsa quoque foret numerus primus, vel, quod eodem redit, regula desideraretur, cuius ope ex quouis numero primo proposito inueniri posset nouus numerus primus. At huius modi regulam profundissimae esse indaginis, quilibet in huius modi inuestigationibus vel leuiter versatus facile agnoscet, ita vt hinc nulla plane spes affulgeat, vnquam ad solutionem allati problematis *Fermatiani* perueniendi.

Certum igitur est, in hoc problemate nihil adhuc esse praestitum, postquam ipsius *Fermatii* conatus successu sint destituti. Atque adeo, cum tabula numerorum primorum nondum vltra centena millia habeatur extensa, problema sane iam non parum foret difficile, si modo numeri primi quaerantur, qui sint centenis millibus maiores; vel cum nuper prodierit tabula numerorum primorum vsque ad 101000 excurrens, si numeri primi quaerantur hunc terminum superantes. Neque enim ad hoc saltem problema soluendum alia via patere videtur, nisi vt more solito ex numeris vltra 101000 notatis omnes compositi expungantur, hoc est: omnes, qui per vllum numerum primum, radice quadrata minorem, diuisibiles deprehendentur; qui numeri enim his expunctis relinquentur, erunt numeri primi. Haec autem operatio instituenda plane foret eadem ratione, ac si ipsam tabulam numerorum primorum ad vlteriores limites continuare vellemus; quod opus propterea esset

im-

immensi laboris. Quodsi autem quis forte hunc laborem susciperet, certe non esset expectandum, vt vltra millionem a quoquam produceretur, eoque exantlato omnino impossibile videretur, vllum numerum primum exhibere, qui esset millione maior.

Occurrit autem mihi methodus peculiaris, ex qua per calculum non admodum taediosum plures sum adeptus numeros, non solum centies millibus, sed etiam millione maiores, quos esse primos certo asseuerare possum. Quoniam igitur in tam ardua inuestigatione leuiores successus non sunt contemnendi, haud inutile fore spero, si isthanc methodum meam exposuero, praesertim cum ipsa ex proprietatibus numerorum non spernendis sit deriuata, quae etiam in aliis inuestigationibus vsum insignem habere posse videntur.

Deductus autem sum ad hanc methodum per considerationem numerorum quadratorum vnitate auctorum, seu in hac formula $aa+1$ contentorum, in quibus, siquidem a sit numerus par, plures numeros primos occurrere manifestum est, sin autem a sit numerus impar, semissis illius formulae $\frac{1}{2}(aa+1)$ plurimos quoque suppeditat numeros primos. Quaesiui ergo omnes diuisores numerorum in hac forma $aa+1$ contentorum, qui labor non adeo erat taediosus, cum non opus esset diuisionem per omnes numeros primos radice a minores tentare, propterea quod demonstraui, atque id quidem post *Fermatium*, cuius autem demonstratio pro deperdita est habenda, huiusmodi numeros $aa+1$ alios diuisores non admittere, nisi qui ipsi sint fint fummae duorum quadratorum. Quare fi numerus in hac forma $aa+1$ contentus habeat diuifores, certo fcio, hos diuifores fingulos in forma $pp+qq$ effe contentos. Cum deinde omnes numeri primi formae $4n+1$ fint fummae duorum quadratorum, numerorum autem primorum formae $4n-1$ nullus fit duorum quadratorum fumma, nullus certe numerus formae $4n-1$ erit diuifor formae $aa+1$; fed fi ea habeat diuifores primos, eos in hac forma $4n+1$ contineri neceffe eft. Confideraui itaque omnes numeros primos formae $4n+1$, et ea quadrata primum inueftigaui, quae vnitate aucta effent per quemuis horum numerorum primorum diuifibilia, quo pacto omnes numeros formae $aa+1$ fum adeptus, qui non funt numeri primi, reliquos ergo neceffario primos effe oportet. Primum autem manifeftum eft, per binarium, qui eft etiam fumma duorum quadratorum, formam $aa+1$ effe diuifibilem, quoties a fuerit numerus impar. Supereft ergo, vt ii ipfius a valores indagentur, qui reddant formam $aa+1$ diuifibilem per quemquam horum numerorum primorum 5, 13, 17, 29, 37, 41, etc. qui ipfi funt duorum quadratorum fummae; quem in finem praemitto fequens problema:

Problema I.

Propofito numero primo formae $4n+1$, inuenire omnia quadrata, quae vnitate aucta per illum funt diuifibilia.

Solutio.

Cum ifte numerus primus fit fumma duorum quadratorum, fit $4n+1=p^2+q^2$, quadratum vero vnitate auctum per illum diuisibile sit $aa+1$. Demonstraui autem, quando summa duorum quadratorum, veluti $aa+bb$, diuisibilis est per numerum primum $pp+qq$, semper dari duos huiusmodi numeros r et s, vt sit $a=pr+qs$ et $b=ps-qr$. Nostro casu ergo cum sit $bb=1$, necesse est, vt sit $ps-qr=\pm 1$: vnde perspicitur fractiones $\frac{p}{q}$ et $\frac{r}{s}$ proxime inter se conuenire, ita vt earum differentia $\frac{ps-qr}{qs}$ minorem numeratorem, vnitati quippe aequalem, habere nequeat. Quare cum numeri p et q ex aequalitate $4n+1=pp+qq$ sint cogniti, formetur fractio $\frac{p}{q}$, quaeraturque in numeris minoribus fractio $\frac{r}{s}$ illi proxime aequalis, vt partibus per crucem multiplicatis productorum ps et qr differentia sit $=1$, id quod methodo a me alibi exposita facile fiet; tum ad fractionem $\frac{p}{q}$ inuenta hac fractione $\frac{r}{s}$, erit quadrati vnius quaesiti radix $a=pr+qs$, vel etiam $a=-pr-qs$. Tum vero si multiplum quodcunque diuisoris $4n+1$ addatur, habebitur quoque valor idoneus pro a. Generatim ergo erit $a=m(4n+1)\pm(pr+qs)$, in qua forma continentur radices omnium quadratorum, quae vnitate aucta per numerum primum propositum $4n+1$ sunt diuisibilia. Q. E. I.

Scholion.

Quemadmodum autem data fractione $\frac{p}{q}$ aliam fractionem $\frac{r}{s}$ inueniri conueniat, quae ab illa tam parum discrepet, vt producta per crucem orta ps et qr vnitate tantum differant, alio loco ostendi. Scilicet pro numeris p et q eadem operatio institui debet, quae vulgo

vulgo ad eorum maximum communem diuisorem inueniendum institui solet, tum ex quotis ordine scriptis formentur fractiones, quales ex fractionibus continuis prodeunt, earumque vltima erit ipsa fractio $\frac{p}{q}$, penultima autem pro $\frac{r}{s}$ assumi poterit, eritque differentia inter producta ps et qr vnitati aequalis; propterea quod numeri p et q erunt inter se primi, quoniam alias numerus $4n+1=pp+qq$ non foret primus. Inventa autem fractione $\frac{r}{s}$, manifestum est, eius loco quoque assumi posse has fractiones $\frac{p+r}{q+s}$, $\frac{2p+r}{2q+s}$ et in genere $\frac{mp+r}{mq+s}$; nam et haec fractio cum fractione $\frac{p}{q}$ comparata dat producta per crucem $mpq+qr$ et $mpq+ps$ vnitate differentia. Quod si autem fractioni $\frac{p}{q}$ haec $\frac{mp+r}{mq+s}$ adiungatur, ex iis pro radice quadrati quaesiti obtinetur $a=mpp+pr+mqq+qs=m(4n+1)+pr+qs$ ob $pp+qq=4n+1$. Seu cum numeri r et s quoque negatiue accipi queant, $a=m(4n+1)\pm(pr+qs)$, quae est ipsa forma generalis in solutione inuenta. Verum haec operatio commodissime per exempla docebitur.

Exemplum 1.

Inuenire omnia quadrata, quae vnitate aucta sint per numerum primum 29 diuisibilia.

Sit a radix quadrata ex quadratis quaesitis, et cum 29 sit numerus primus formae $4n+1$, erit certe summa duorum quadratorum, quae sunt 25 et 4, ita vt ob $29=pp+qq=5^2+2^2$, sit $p=5$ et $q=2$, vnde formatur ista fractio $\frac{p}{q} = \frac{5}{2}$. Nunc inter numeros 5 et 2 instituatur operatio ad maximum communem diuisorem inuestigandum, quae ita se habebit:

$$\begin{array}{l} 2)\,5\,(2 \\ \quad \underline{4} \\ \quad 1)\,2\,(2 \\ \qquad \underline{2} \\ \qquad 0 \end{array}$$

Sunt ergo quoti 2 et 2, ex quibus formantur fractiones sequenti modo:

$$\begin{array}{ccc} & 2 & 2 \\ \frac{1}{0}, & \frac{2}{1}, & \frac{5}{2} \end{array}$$

eritque penultima $\frac{2}{1} = \frac{r}{s}$, ex his autem duabus vltimis fractionibus $\frac{2}{1}$ et $\frac{5}{2}$ valor idoneus pro a erit productum numeratorum $2.5 = 10$ aucta producto denominatorum $1.2 = 2$; vnde erit $a = 10 + 2 = 12$, et in genere $a = 29m + 12$; omniumque horum numerorum quadrata vnitate aucta per 29 erunt diuisibilia. Quare omnes valores ipsius a in his duabus progressionibus arithmeticis continebuntur:

12, 41, 70, 99, 128, 157, 186, 215, 244, 273, etc.
17, 46, 75, 104, 133, 162, 191, 220, 249, 278, etc.

Exemplum 2.

Inuenire omnia quadrata, quae vnitate aucta fiant per numerum primum 617 diuisibilia.

Cum

Cum sit $617 = 16^2 + 19^2$, statuatur $p = 19$ et $q = 16$, fiatque inter numeros 16 et 19 haec operatio:

```
16) 19 (1
    16
    ---
     3) 16 (5
        15
        ---
         1) 3 (3
            3
            -
            0
```

Ex quotis 1, 5, 3 sequentes formentur fractiones:

$$\begin{matrix} & 1. & 5. & 3 \\ \frac{1}{0}, & \frac{1}{1}, & \frac{6}{5}, & \frac{19}{16} \end{matrix}$$

quarum binae postremae dant numeratorum productum $= 114$

. . . . . at denominatorum productum $= 80$

vnde idoneus isque minimus valor ipsius a erit $= 194$ et generatim $a = 617m \pm 194$. Omnes ergo ipsius a valores in duabus sequentibus progressionibus arithmeticis comprehenduntur:

194, 811, 1428, 2045, 2662, 3279 etc.

423, 1040, 1657, 2274, 2891, 3508 etc.

Exemplum 3.

Inuenire omnia quadrata, quae vnitate aucta sint per numerum primum 1709 *diuisibilia.*

Cum sit $1709 = 22^2 + 35^2$, inter numeros 22 et 35 sequens instituatur operatio:

```
22) 35 (1
    22
    --
    13) 22 (1
        13
        --
         9) 13 (1
             9
            --
             4) 9 (2
                8
               --
                1) 4 (4
                   4
                   -
                   0
```

et ex quotis 1, 1, 1, 2, 4 formentur sequentes fractiones.

$$\begin{array}{cccccc} & 1. & 1. & 1. & 2. & 4 \\ \frac{1}{0}, & \frac{1}{1}, & \frac{2}{1}, & \frac{3}{2}, & \frac{8}{5}, & \frac{35}{22} \end{array}$$

quarum duae vltimae dabunt pro vno ipsius a valore:

$$a = 8.\,35 + 5.\,22 = 390$$

ita vt omnes ipsius a valores satisfacientes sint:

$$a = 1709\,m \pm 390$$

Coroll. 1.

Si numerus primus $4n+1$ fuerit ipse quadratum vnitate auctum, veluti $4n+1 = p^2 + 1$, tum ob $q = 1$, sequens operatio erit instituenda:

```
1) p (p
   p
```

vni-

vnicus ergo habetur quotus p, ex quo nascentur fractiones

$$\frac{1}{0},\quad \frac{p}{1}$$

vnde fit $a = 1.p + 0.1 = p$, et generatim $a = m(4n+1) \pm p$.

Coroll. 2.

Si amborum quadratorum, quorum summae numerus primus $4n+1$ aequatur, radices vnitate differant, vt sit $4n+1 = pp + (p-1)^2$, tum ob $q = p-1$ sequens habebitur operatio:

$$\begin{array}{l} p-1)\; p \quad (1 \\ \quad\;\; \underline{p-1} \\ \qquad\quad 1)\; p-1 \;\; (p-1 \\ \qquad\qquad\;\; \underline{p-1} \\ \qquad\qquad\quad 0 \end{array}$$

Quoti ergo 1 et $p-1$ has dabunt fractiones:

$$\begin{array}{ccc} & 1 & p-1 \\ \frac{1}{0}, & \frac{1}{1}, & \frac{p}{p-1} \end{array}$$

vnde fit $a = 1.p + 1.(p-1) = 2p-1$, et in genere
$a = (4n+1)m \pm (2p-1)$.

Coroll. 3.

Si quaerantur omnia quadrata, quae vnitate aucta sint per numerum primum $2 = 1+1$ diuisibilia, etsi 2 non est formae $4n+1$, tamen, quia $p = 1$, et $q = 1$, erit primo $a = 1$ per coroll. 1, hincque in genere $a = 2m \pm 1$. Vnde sequitur, quod per se est manifestum, omnia qua-

quadrata numerorum imparium, si vnitas addatur, fore per 2 diuisibilia.

Scholion 2.

Secundum hanc ergo regulam omnes numeros primos formae $4n+1$ tractaui, et postquam singulos in summam duorum quadratorum conuerti, quod semper et quidem vnico modo fieri potest, cuique formam generalem ipsius a, in qua radices omnium quadratorum, quae vnitate aucta per quemque numerum primum sint diuisibilia, adscripsi, vnde sequens nata est tabula:

Tabula omnium numerorum a

quorum quadrata vnitate aucta $aa+1$ sunt per quemlibet numerum primum formae $4n+1$ diuisibilia.

Numeri primi	Valor ipsius a
$2 = 1^2 + 2^2$	$a = 2m \pm 1$
$5 = 1^2 + 2^2$	$a = 5m \pm 2$
$13 = 2^2 + 3^2$	$a = 13m \pm 5$
$17 = 1^2 + 4^2$	$a = 17m \pm 4$
$29 = 2^2 + 5^2$	$a = 29m \pm 12$
$37 = 1^2 + 6^2$	$a = 37m \pm 6$
$41 = 4^2 + 5^2$	$a = 41m \pm 9$
$53 = 2^2 + 7^2$	$a = 53m \pm 23$
$61 = 5^2 + 6^2$	$a = 61m \pm 11$
$73 = 3^2 + 8^2$	$a = 73m \pm 27$
$89 = 5^2 + 8^2$	$a = 89m \pm 34$
$97 = 4^2 + 9^2$	$a = 97m \pm 22$

Numeri

Numeri primi	Valor ipsius a
$101 = 1^2 + 10^2$	$a = 101\,m \pm 10$
$109 = 3^2 + 10^2$	$a = 109\,m \pm 33$
$113 = 7^2 + 8^2$	$a = 113\,m \pm 15$
$137 = 4^2 + 11^2$	$a = 137\,m \pm 37$
$149 = 7^2 + 10^2$	$a = 149\,m \pm 44$
$157 = 6^2 + 11^2$	$a = 157\,m \pm 28$
$173 = 2^2 + 13^2$	$a = 173\,m \pm 80$
$181 = 9^2 + 10^2$	$a = 181\,m \pm 19$
$193 = 7^2 + 12^2$	$a = 193\,m \pm 81$
$197 = 1^2 + 14^2$	$a = 197\,m \pm 14$
$229 = 2^2 + 15^2$	$a = 229\,m \pm 107$
$233 = 8^2 + 13^2$	$a = 233\,m \pm 89$
$241 = 4^2 + 15^2$	$a = 241\,m \pm 64$
$257 = 1^2 + 16^2$	$a = 257\,m \pm 16$
$269 = 10^2 + 13^2$	$a = 269\,m \pm 82$
$277 = 9^2 + 14^2$	$a = 277\,m \pm 60$
$281 = 5^2 + 16^2$	$a = 281\,m \pm 53$
$293 = 2^2 + 17^2$	$a = 293\,m \pm 138$
$313 = 12^2 + 13^2$	$a = 313\,m \pm 25$
$317 = 11^2 + 14^2$	$a = 317\,m \pm 114$
$337 = 9^2 + 16^2$	$a = 337\,m \pm 148$
$349 = 5^2 + 18^2$	$a = 349\,m \pm 136$
$353 = 8^2 + 17^2$	$a = 353\,m \pm 42$
$373 = 7^2 + 18^2$	$a = 373\,m \pm 104$
$389 = 10^2 + 17^2$	$a = 389\,m \pm 115$
$397 = 6^2 + 19^2$	$a = 397\,m \pm 63$
$401 = 1^2 + 20^2$	$a = 401\,m \pm 20$
$409 = 3^2 + 20^2$	$a = 409\,m \pm 143$
$421 = 14^2 + 15^2$	$a = 421\,m \pm 29$

Numeri primi	Valor ipsius a
$433 = 12^2 + 17^2$	$a = 433\,m + 179$
$449 = 7^2 + 20^2$	$a = 449\,m \pm 67$
$457 = 4^2 + 21^2$	$a = 457\,m \pm 109$
$461 = 10^2 + 19^2$	$a = 461\,m \pm 48$
$509 = 5^2 + 22^2$	$a = 509\,m \pm 208$
$521 = 11^2 + 20^2$	$a = 521\,m \pm 235$
$541 = 10^2 + 21^2$	$a = 541\,m \pm 52$
$557 = 14^2 + 19^2$	$a = 557\,m \pm 118$
$569 = 13^2 + 20^2$	$a = 569\,m \pm 86$
$577 = 1^2 + 24^2$	$a = 577\,m \pm 24$
$593 = 8^2 + 23^2$	$a = 593\,m \pm 77$
$601 = 5^2 + 24^2$	$a = 601\,m \pm 125$
$613 = 17^2 + 18^2$	$a = 613\,m \pm 35$
$617 = 16^2 + 19^2$	$a = 617\,m \pm 194$
$641 = 4^2 + 25^2$	$a = 641\,m \pm 159$
$653 = 13^2 + 22^2$	$a = 653\,m \pm 144$
$661 = 6^2 + 25^2$	$a = 661\,m \pm 106$
$673 = 12^2 + 23^2$	$a = 673\,m \pm 58$
$677 = 1^2 + 26^2$	$a = 677\,m \pm 26$
$701 = 5^2 + 26^2$	$a = 701\,m \pm 135$
$709 = 15^2 + 22^2$	$a = 709\,m \pm 96$
$733 = 2^2 + 27^2$	$a = 733\,m \pm 353$
$757 = 9^2 + 26^2$	$a = 757\,m \pm 87$
$761 = 19^2 + 20^2$	$a = 761\,m \pm 39$
$769 = 12^2 + 25^2$	$a = 769\,m \pm 62$
$773 = 17^2 + 22^2$	$a = 773\,m \pm 317$
$797 = 11^2 + 26^2$	$a = 797\,m \pm 215$
$809 = 5^2 + 28^2$	$a = 809\,m \pm 318$
$821 = 14^2 + 25^2$	$a = 821\,m \pm 295$

Numeri

Numeris primi	Valor ipsius a
$829 = 10^2 + 27^2$	$a = 829\,m \pm 246$
$853 = 18^2 + 23^2$	$a = 853\,m \pm 333$
$857 = 4^2 + 29^2$	$a = 857\,m \pm 207$
$877 = 6^2 + 29^2$	$a = 877\,m \pm 151$
$881 = 16^2 + 25^2$	$a = 881\,m \pm 387$
$929 = 20^2 + 23^2$	$a = 929\,m \pm 324$
$937 = 19^2 + 24^2$	$a = 937\,m \pm 196$
$941 = 10^2 + 29^2$	$a = 941\,m \pm 97$
$953 = 13^2 + 28^2$	$a = 953\,m \pm 442$
$977 = 4^2 + 31^2$	$a = 977\,m \pm 252$
$997 = 6^2 + 31^2$	$a = 997\,m \pm 161$
$1009 = 15^2 + 28^2$	$a = 1009\,m \pm 469$
$1013 = 22^2 + 23^2$	$a = 1013\,m \pm 45$
$1021 = 11^2 + 30^2$	$a = 1021\,m \pm 255$
$1043 = 3^2 + 32^2$	$a = 1033\,m \pm 347$
$1039 = 5^2 + 32^2$	$a = 1049\,m \pm 426$
$1061 = 10^2 + 31^2$	$a = 1061\,m \pm 103$
$1069 = 13^2 + 30^2$	$a = 1069\,m \pm 249$
$1093 = 2^2 + 33^2$	$a = 1093\,m \pm 530$
$1097 = 16^2 + 29^2$	$a = 1097\,m \pm 341$
$1109 = 22^2 + 25^2$	$a = 1109\,m \pm 354$
$1117 = 21^2 + 26^2$	$a = 1117\,m \pm 214$
$1129 = 20^2 + 27^2$	$a = 1129\,m \pm 168$
$1153 = 8^2 + 33^2$	$a = 1153\,m \pm 140$
$1181 = 5^2 + 34^2$	$a = 1181\,m \pm 243$
$1193 = 13^2 + 32^2$	$a = 1193\,m \pm 186$
$1201 = 24^2 + 25^2$	$a = 1201\,m \pm 49$
$1213 = 22^2 + 27^2$	$a = 1223\,m \pm 495$
$1217 = 16^2 + 31^2$	$a = 1217\,m \pm 78$

Numeri primi	Valor ipsius a
$1229 = 2^2 + 35^2$	$a = 1229\,m + 597$
$1237 = 9^2 + 34^2$	$a = 1237\,m + 546$
$1249 = 15^2 + 32^2$	$a = 1249\,m + 585$
$1277 = 11^2 + 34^2$	$a = 1277\,m + 113$
$1289 = 8^2 + 35^2$	$a = 1289\,m + 479$
$1297 = 1^2 + 36^2$	$a = 1297\,m + 36$
$1301 = 25^2 + 26^2$	$a = 1301\,m + 51$
$1321 = 5^2 + 36^2$	$a = 1321\,m + 257$
$1361 = 20^2 + 31^2$	$a = 1361\,m + 614$
$1373 = 2^2 + 37^2$	$a = 1373\,m + 668$
$1381 = 15^2 + 33^2$	$a = 1381\,m + 366$
$1409 = 25^2 + 28^2$	$a = 1409\,m + 452$
$1429 = 23^2 + 30^2$	$a = 1429\,m + 620$
$1433 = 8^2 + 37^2$	$a = 1433\,m + 542$
$1453 = 3^2 + 38^2$	$a = 1453\,m + 497$
$1481 = 16^2 + 35^2$	$a = 1481\,m + 465$
$1489 = 20^2 + 33^2$	$a = 1389\,m + 225$
$1493 = 7^2 + 38^2$	$a = 1493\,m + 432$
$1549 = 18^2 + 35^2$	$a = 1549\,m + 88$
$1553 = 23^2 + 32^2$	$a = 1553\,m + 339$
$1597 = 21^2 + 34^2$	$a = 1597\,m + 610$
$1601 = 1^2 + 40^2$	$a = 1601\,m + 40$
$1609 = 3^2 + 40^2$	$a = 1609\,m + 523$
$1613 = 13^2 + 38^2$	$a = 1613\,m + 127$
$1621 = 10^2 + 39^2$	$a = 1621\,m + 166$
$1637 = 26^2 + 31^2$	$a = 1637\,m + 316$
$1657 = 19^2 + 36^2$	$a = 1657\,m + 783$
$1669 = 15^2 + 38^2$	$a = 1669\,m + 220$
$1693 = 18^2 + 37^2$	$a = 1693\,m + 92$

Numeri

Numeri primi	Valor ipsius a
$1697 = 4^2 + 41^2$	$a = 1697\,m \pm 414$
$1709 = 22^2 + 35^2$	$a = 1709\,m \pm 390$
$1721 = 11^2 + 40^2$	$a = 1721\,m \pm 473$
$1733 = 17^2 + 38^2$	$a = 1733\,m \pm 410$
$1741 = 29^2 + 30^2$	$a = 1741\,m \pm 59$
$1753 = 27^2 + 32^2$	$a = 1753\,m \pm 713$
$1777 = 16^2 + 39^2$	$a = 1777\,m \pm 775$
$1789 = 5^2 + 42^2$	$a = 1789\,m \pm 724$
$1801 = 24^2 + 35^2$	$a = 1801\,m \pm 824$
$1861 = 30^2 + 21^2$	$a = 1861\,m \pm 61$
$1873 = 28^2 + 33^2$	$a = 1873\,m \pm 737$
$1877 = 14^2 + 41^2$	$a = 1877\,m \pm 137$
$1889 = 17^2 + 40^2$	$a = 1889\,m \pm 331$
$1901 = 26^2 + 35^2$	$a = 1901\,m \pm 218$
$1913 = 8^2 + 43^2$	$a = 1913\,m \pm 712$
$1933 = 13^2 + 42^2$	$a = 1933\,m \pm 598$
$1949 = 10^2 + 43^2$	$a = 1949\,m \pm 589$
$1973 = 23^2 + 38^2$	$a = 1973\,m \pm 259$
$1993 = 12^2 + 43^2$	$a = 1993\,m \pm 834$
$1997 = 29^2 + 34^2$	$a = 1997\,m \pm 412$

Tabula ergo haec in se complectitur omnes numeros primos formae $4n+1$ infra 2000 existentes, eiusque ergo ope omnes numeri inueniri possunt, quorum quadrata vnitate aucta per vllum horum numerorum primorum sint diuisibilia. Eius ergo beneficio sequens solui poterit problema:

Problema.

Omnium numerorum, qui vnitate excedunt numeros quadratos, aſſignare omnes diuiſores radicibus ipſorum quadratis minores.

Solutio.

Scribantur ordine omnes numeri ab vnitate ad 2000, quandoquidem praecedens tabula ad hunc terminum eſt producta, qui littera a deſignentur, ita pro quouis numeri inde nati $aa + 1$ diuiſores ſint aſſignandi. Conſtat autem, hos numeros alios non eſſe habituros diuiſores primos, niſi formae $4n + 1$, praecedens vero tabula omnes numeros a exhibet, quorum quadrata vnitate aucta ſint per quemque numerum primum huius formae diuiſibilia. Verum pro quolibet numero $aa + 1$ ſufficit notaſſe diuiſores primos radice a minores: quoniam his cognitis etiam diuiſores radice a maiores ſponte innoteſcunt. Quam ob rem ſingulis numeris a formae $2m \pm 1$ adſcribatur binarius: quia eorum quadrata vnitate aucta ſunt per 2 diuiſibilia; tum numeris $a = 5m \pm 2$ adſcribatur 5, numeris $a = 13m \pm 5$ adſcribatur 13, numeris $a = 17m \pm 4$ adſcribatur 17, et ita porro; vbi quidem valores ipſius a minores ipſo numero primo propoſito omittuntur, quia tantum de diuiſoribus ipſo numero a minoribus quaeritur. Hoc ergo modo ſi ope tabulae praecedentis cuique numero a diuiſores conuenientes adſcribantur, obtinebuntur omnes diuiſores numeri $aa + 1$ ipſa radice a minores. Q. E. I.

Coroll.

Coroll. 1.

Si ergo hoc modo numeri a relinquentur, quibus nullus diuifor fuerit adfcriptus, hoc indicio erit, numeros $aa+1$ inde natos effe primos, nullos quippe diuifores admittentes praeter vnitatem et fe ipfos. Quibus igitur numeris a in tabula hoc modo condita nullus diuifor fuerit adfcriptus, de iis certo affirmare poterimus, eorum quadrata vnitate aucta effe numeros primos.

Coroll. 2.

Quoniam igitur haec tabula pro numeris a facile ad 2000 extenditur, numeri inde nati $aa+1$ ad 4000000 exfurgent; vnde ifta tabula omnes numeros primos formae $aa+1$ exhibebit, qui 4 milliones non fuperant, ficque ex ea numeri primi non folum centenis millibus fed etiam vno millione maiores depromi poterunt.

Coroll. 3.

Quibus autem numeris a vnicus diuifor α fuerit adfcriptus, numeri inde nati $aa+1$ praeter vnitatem vnicum habebunt hunc diuiforem α, radice a minorem; ideoque $\frac{aa+1}{\alpha}$ erit numerus primus. Ita quibus numeris a foles binarius fuerit adfcriptus, ex iis certo hos obtinemus numeros primos $\frac{aa+1}{2}$; atque adeo ex ifta tabula omnes numeri primi formae $\frac{aa+1}{2}$ limite 2000000 non maiores affignari poterunt.

Coroll.

Coroll. 4.

Simili modo omnes numeri a, quibus folus quinarius eft adfcriptus, praebebunt omnes numeros primos formae $\frac{aa+1}{5}$, qui infra limitem 800000 continentur. Atque omnes numeri a, qui tantum diuiforem 13 habebunt adfcriptum, praebebunt omnes numeros primos formae $\frac{aa+1}{13}$, infra limitem 307692 contentos.

Coroll. 5.

Qui autem numeri a duos tantum diuifores α et β habebunt adfcriptos, id indicio erit, numeros $\frac{aa+1}{\alpha\beta}$ fore primos. Hinc quibus numeris a tantum duo diuifores 2 et 5 fuerint adfcripti, ex iis reperientur omnes numeri primi formae $\frac{aa+1}{10}$, qui quidem limitem 400000 non fuperabunt.

Scholion 1.

Verum vt hae conclufiones fint certae, probe notandum eft, inter numeros $aa+1$, qui funt per numerum primum $4n+1$ diuifibiles, etiam eiusmodi numeros contineri, qui fint per quadratum $(4n+1)^2$, vel etiam per cubum $(4n+1)^3$, altioresue poteftates $(4n+1)^4$, $(4n+1)^5$ etc. diuifibiles. Quod quoties accidit, numero a non folum diuifor $4n+1$, fed eius fumma poteftas, per quam numerus $aa+1$ fuerit diuifibilis, adfcribi debebit, vt hoc modo omnes diuifores primi numerorum $aa+1$ ipfa radice a minores obtineantur. Si quidem diuifor fuerit $=2$, nulla eius altior

altior poteſtas, veluti 4, 8, 16 etc. vnquam numeri $aa+1$ diuiſor eſſe poterit, id quod per ſe eſt manifeſtum, cum exiſtente a numero impari, forma $aa+1$ ſit numerus impariter par. At de numeris primis formae $4n+1$ dantur vtique eiusmodi quadrata, quae vnitate aucta ſint per quamuis eorum poteſtatem diuiſibilia, quos idcirco inueſtigari conueniet.

Scholion 2.

Cum autem ſit $4n+1=pp+qq$, erunt omnes quoque ipſius $4n+1$ poteſtates ſummae duorum quadratorum, et quidem pluribus modis, ex quibus vero id quadratorum par ſumi conueniet, quorum radices ſunt numeri primi inter ſe. Sic cum ſit in genere $(pp+qq)(rr+ss)=(pr+qs)^2+(ps-qr)^2$, erit

$$(4n+1)^2=(pp+qq)^2=4ppqq+(pp-qq)^2$$
$$(4n+1)^3=(pp+qq)^3=(p^3-3pqq)^2+(3ppq-q^3)^2$$
$$(4n+1)^4=(pp+qq)^4=(p^4-6ppqq+q^4)^2+(4p^3q-4pq^3)^2$$

Si ſimili modo, quo ante, valores ipſius a inueſtigentur, conficietur pro poteſtatibus numerorum primorum, quae infra terminum 2000 continentur, ſequens tabula;

Tabula omnium numerorum *a*,

quorum quadrata vnitate aucta $aa+1$ fint per poteftates numerorum primorum $4n+1$ diuifibilia.

Poteft. num. primor.	Valor ipfius a
$5^2 = 3^2 + 4^2$	$a = 25\, m \pm 7$
$5^3 = 2^2 + 11^2$	$a = 125\, m \pm 57$
$5^4 = 7^2 + 24^2$	$a = 625\, m \pm 182$
$5^5 = 38^2 + 41^2$	$a = 3125\, m \pm 1068$
$13^2 = 5^2 + 12^2$	$a = 169\, m \pm 70$
$13^3 = 9^2 + 46^2$	$a = 2197\, m \pm 239$
$13^4 = 119^2 + 120^2$	$a = 13^4 m \pm 239$
$17^2 = 8^2 + 15^2$	$a = 289\, m \pm 38$
$17^3 = 47^2 + 52^2$	$a = 17^3 m \pm 1985$
$29^2 = 20^2 + 21^2$	$a = 841\, m \pm 41$
$37^2 = 12^2 + 35^2$	$a = 1369\, m \pm 117$
$41^2 = 9^2 + 40^2$	$a = 1681\, m \pm 378$
$53^2 = 28^2 + 45^2$	$a = 53^2 m \pm 500$
$61^2 = 11^2 + 60^2$	$a = 61^2 m \pm 682$
$73^2 = 48^2 + 55^2$	$a = 73^2 m \pm 776$
$89^2 = 39^2 + 80^2$	$a = 89^2 m \pm 3861$
$97^2 = 65^2 + 72^2$	$a = 97^2 m \pm 4052$
$101^2 = 20^2 + 99^2$	$a = 101^2 m \pm 515$
$109^2 = 60^2 + 91^2$	$a = 109^2 m \pm 5744$
$113^2 = 15^2 + 112^2$	$a = 113^2 m \pm 1710$
$137^2 = 88^2 + 105^2$	$a = 137^2 m \pm 6613$
$149^2 = 51^2 + 140^2$	$a = 149^2 m \pm 1744$
$197^2 = 28^2 + 95^2$	$a = 197^2 m \pm 1393$
$257^2 = 32^2 + 255^2$	$a = 257^2 m \pm 2072$

Hic

His itaque subsidiis hic subiunctam construxi tabulam, ex qua statim pro singulis numeris a omnes diuisores formae $aa+1$ habentur. Hanc quidem tabulam non vltra 1500 in radicibus continuaui, sed ope harum formularum facile ad 2000 vsque progredi licebit.

Ex hac autem tabula iam plures numeri primi formae $aa+1$ desumi poterunt, qui non solum centenis millibus, sed etiam vno millione sint maiores: deinde etiam numeri primi formae $\frac{aa+1}{2}$ et $\frac{aa+1}{6}$ item $\frac{aa+1}{10}$ quos in sequentibus tabellis exhibebo.

Numeri primi formae $aa+1$.

Radices a	Numeri primi $aa+1$	Radices a	Numeri primi $aa+1$	Radices a	Numeri primi $aa+1$
1	2	66	4357	156	24337
2	5	74	5477	160	25601
4	17	84	7057	170	28901
6	37	90	8101	176	30977
10	101	94	8837	180	32401
14	197	110	12101	184	33857
16	257	116	13457	204	41617
20	401	120	14401	206	42437
24	577	124	15377	210	44101
26	677	126	15877	224	50177
36	1297	130	16901	230	52901
40	1601	134	17957	236	55697
54	2917	146	21317	240	57601
56	3137	150	22501	250	62501

Radices a	Numeri primi $aa+1$	Radices a	Numeri primi $aa+1$	Radices a	Numeri primi $aa+1$
256	65537	536	287297	826	682277
260	67601	544	295937	860	739601
264	69697	556	309137	864	746497
270	72901	570	324901	890	792101
280	78401	576	331777	906	820837
284	80657	584	341057	910	828101
300	90001	594	352837	920	846401
306	93637	634	401957	930	864901
314	98597	636	404497	936	876097
326	106277	644	414737	946	894917
340	115601	646	417317	950	902501
350	122501	654	427717	960	921601
384	147457	674	454277	966	933157
386	148997	680	462401	986	972197
396	156817	686	470597	1004	1008017
400	160001	690	476101	1010	1020101
406	164837	696	484417	1036	1073297
420	176401	700	490001	1054	1110917
430	184901	704	495617	1060	1123601
436	190097	714	509797	1066	1136357
440	193601	716	512657	1070	1144901
444	197137	740	547601	1094	1196837
464	215297	750	562501	1096	1201217
466	217157	760	577601	1106	1223237
470	220901	764	583697	1124	1263377
474	224677	780	608401	1140	1299601
490	240101	784	614657	1144	1308737
496	246017	816	665857	1146	1313317

Radi-

Radices a	Numeri primi $aa+1$	Radices a	Numeri primi $aa+1$	Radices a	Numeri primi $aa+1$
1150	1322501	1294	1674437	1394	1943237
1156	1336337	1306	1705637	1406	1976837
1174	1378277	1314	1726597	1410	1988101
1176	1382977	1316	1731857	1416	2005057
1184	1401857	1320	1742401	1420	2016401
1210	1464101	1324	1752977	1430	2044901
1234	1522757	1340	1795601	1434	2056351
1244	1547537	1350	1822501	1440	2073601
1246	1552517	1354	1833317	1456	2119937
1274	1623077	1366	1865957	1460	2131601
1276	1628177	1374	1887877	1494	2232037
1290	1664101	1376	1893377		

Habentur ergo hic 112 numeri primi maiores quam 100000 et 49 numeri primi millionem ſuperantes.

Praeterea autem plures numeri primi formarum $\frac{aa+1}{2}$, $\frac{aa+1}{5}$, $\frac{aa+1}{10}$ aſſignari poſſunt, qui etiam centena millia ſuperant; vt ex ſequentibus perſpicere licet:

Valores numeri a, quibus forma $\frac{aa+1}{2}$ fit numerus primus.

1, 3, 5, 9, 11, 15, 19, 25, 29, 35, 39, 45, 49, 51, 59, 61, 65, 69, 71, 79, 85, 95

101, 121, 131, 139, 141, 145, 159, 165, 169, 171, 175, 181, 195, 199

201, 205, 209, 219, 221, 231, 245, 261, 271, 275, 279, 289, 299

309, 315, 321, 325, 329, 335, 345, 349, 371, 375, 379, 391, 399
405, 409, 415, 425, 435, 441, 445, 449, 451, 459, 461, 471
519, 521, 529, 535, 545, 559, 569, 571, 575, 579, 581, 595
609, 631, 639, 641, 649, 661, 669, 685, 689, 695, 699
711, 715, 739, 745, 751, 779, 781, 791, 799
815, 819, 821, 841, 855, 861, 869, 875, 881, 885
901, 909, 921, 925, 929, 935, 949, 951, 955, 959, 979, 981, 985, 989, 991
1001, 1011, 1025, 1029, 1031, 1039, 1051, 1055, 1069, 1081, 1091, 1095, 1099
1111, 1125, 1129, 1151, 1155, 1161, 1171, 1179, 1181, 1185, 1199
1205, 1219, 1225, 1241, 1251, 1255, 1265, 1281, 1285, 1299
1311, 1315, 1329, 1345, 1349, 1359, 1361, 1389, 1391
1405, 1411, 1419, 1421, 1439, 1459, 1465, 1469, 1489, 1495, 1499

Valores numeri a, quibus forma $\frac{aa+1}{5}$ fit numerus primus.

2, 8, 12, 22, 28, 42, 48, 52, 58, 62, 78, 88, 92
102, 108, 152, 158, 178, 188, 198
202, 222, 238, 248, 258, 262, 272, 292, 298
308, 312, 328, 352, 358, 362, 388
402, 422, 428, 458, 462, 478, 488, 492
508, 522, 558, 572, 588

602

602, 622, 628, 638, 652, 662, 692, 698
702, 728, 738, 758, 792
828, 838, 842, 848, 862, 872, 898
908, 912, 942, 962, 972, 978, 988
1008, 1062, 1072, 1078, 1088
1108, 1112, 1138, 1192
1208, 1238, 1272, 1278, 1298
1312, 1342, 1358, 1372, 1378
1402, 1442, 1452, 1472, 1488, 1498

Valores numeri a, quibus forma $\frac{aa+1}{10}$ fit numerus primus.

3, 7, 13, 17, 23, 27, 33, 37, 53, 63, 67, 77, 87, 97
103, 113, 127, 137, 147, 153, 163, 167, 197
223, 227, 247, 263, 267, 277, 283, 287, 297
303, 323, 347, 363, 367, 373, 383, 397
417, 427, 433, 453
503, 513, 517, 527, 533, 537, 547, 553, 573, 587
617, 627, 637, 653, 673, 677, 683
753, 763, 773, 777, 797
817, 823, 833, 847, 867, 873, 877, 883
913, 917, 923, 927, 933, 937, 947, 953, 963, 997
1047, 1053, 1063, 1073
1103, 1117, 1137, 1147, 1163, 1167, 1173, 1187, 1197
1213, 1233, 1247, 1273
1337, 1367, 1377, 1387, 1397
1413, 1417, 1423, 1447, 1473, 1497

Hinc autem iterum 9 numeri primi ſupra 1000000 obtinentur, ex forma ſcilicet $\frac{aa+1}{10}$, quando $a > 1414$.

a

a	Diuisores ipsius $aa+1$	*a*	Diuisores ipsius $aa+1$
1	2	30	17. 53
2	5	31	2. 13. 37
3	2. 5	32	5^2. 41
4	17	33	2. 5. 109
5	2. 13	34	13. 89
6	37	35	2. 613
7	2. 5^2	36	1297
8	5. 13	37	2. 5. 137
9	2. 41	38	5. 17^2
10	101	39	2. 761
11	2. 61	40	1601
12	5. 29	41	2. 29^2
13	2. 5. 17	42	5. 353
14	197.	43	2. 5^2. 37
15	2. 113	44	13. 149
16	257	45	2. 1013
17	2. 5. 29	46	29. 73
18	5^2. 13	47	2. 5. 13 17
19	2. 181	48	5. 461
20	401	49	2. 1201
21	2. 13. 17	50	41. 61
22	5. 97	51	2. 1301
23	2. 5. 53	52	5. 541
24	577	53	2. 5. 281
25	2. 313	54	2917
26	677	55	2. 17. 89
27	2. 5. 73	56	3137
28	5. 157	57	2. 5^3. 13
29	2. 421	58	5. 673

	Diuifores ipfius $aa+1$		Diuifores ipfius $aa+1$
59	2. 1741	88	5
60	13. 277	89	2. 17. 233
61	2. 1861	90	
62	5. 769	91	2. 41. 101
63	2. 5. 397	92	5
64	17. 241	93	2. 5^2. 173
65	2. 2113	94	
66	4357	95	2
67	2. 5. 449	96	13. 709
68	5^3. 37	97	2. 5
69	2. 2381	98	5. 17. 113
70	13^2. 29	99	2. 13^2 29
71	2. 2521	100	73. 137
72	5. 17. 61	101	2
73	2. 5. 13. 41	102	5
74		103	2. 5
75	2. 29. 97	104	29
76	53. 109	105	2. 37
77	2. 5. 593	106	17
78	5	107	2. 5^2
79	2	108	5
80	37. 173	109	2. 13
81	2. 17	110	
82	5^2. 193 269	111	2. 61. 101
83	2. 5. 13. 53	112	5. 13
84		113	2. 5
85	2	114	41
86	13. 569	115	2. 17
87	2. 5	116	

	Diuisores ipsius $aa+1$
117	2. 5. 37²
118	5²
119	2. 73. 97
120	
121	2
122	5. 13
123	2. 5. 17. 89
124	
125	2. 13
126	
127	2. 5.
128	5. 29. 113
129	2. 53
130	
131	2
132	5². 17. 41
133	2. 5. 29. 61
134	
135	2. 13
136	53
137	2. 5
138	5. 13
139	2
140	17
141	2
142	5. 37. 109
143	2. 5²
144	89
145	2
146	
147	2. 5
148	5. 13
149	2. 17
150	
151	2. 13
152	5
153	2. 5
154	37
155	2. 41
156	
157	2. 5². 17. 29
158	5
159	2
160	
161	2. 13
162	5. 29
163	2. 5
164	13
165	2
166	17
167	2. 5
168	5²
169	2
170	
171	2
172	5. 61. 97
173	2. 5. 41. 73
174	13. 17. 137

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
175	2	203	2. 5. 13
176		204	
177	2. 5. 13	205	2
178	5	206	
179	2. 37	207	2. 5^2
180		208	5. 17
181	2	209	2
182	5^4. 53	210	
183	2. 5. 17	211	2. 113. 197
184		212	5. 89. 101
185	2. 109. 157	213	2. 5. 13
186	29	214	41
187	2. 5. 13	215	2. 29
188	5	216	13. 37. 97
189	2. 53	217	2. 5. 17
190	13	218	5^2
191	2. 17. 29. 37	219	2
192	5. 73. 101	220	29
193	2. 5^2. 149	221	2
194	61	222	5
195	2	223	2. 5
196	41	224	
197	2. 5	225	2. 17
198	5	226	13
199	2	227	2. 5
200	13. 17. 181	228	5. 37
201	2	229	2. 13
202	5	230	
		231	2

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
232	5^2	261	2
233	2. 5. 61. 89	262	5
234	17	263	2. 5
235	2. 53	264	
236		265	2. 13. 37. 73
237	2. 5. 41. 137	266	173
238	5	267	2. 5
239	2. 13^4	268	5^2. 13^2. 17
240		269	2. 97
241	2. 113	270	
242	5. 13. 17. 53	271	2
243	2. 5^2	272	5
244	29	273	2. 5. 29. 257
245	2	274	193
246	73	275	2
247	2. 5	276	17
248	5	277	2. 5
249	2. 29	278	5. 13. 29. 41
250		279	2
251	2. 17^2. 109	280	
252	5. 13	281	2. 13
253	2. 5. 37. 173	282	5^2
254	149	283	2. 5
255	2. 13. 41. 61	284	
256		285	2. 17
257	2. 5^2	286	157
258	5	287	2. 5
259	2. 17	288	5. 53
260		289	2

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
290	37	319	2. 17. 41. 73
291	2. 13	320	13
292	5	321	2
293	2. 5². 17. 101	322	5. 89. 233
294	13. 61. 109	323	2. 5
295	2. 53	324	113
296	41	325	2
297	2. 5	326	
298	5	327	2. 5. 17². 37
299	2	328	5
300		329	2
301	2. 89	330	13
302	5. 17. 37. 29	331	2. 29
303	2. 5	332	5²
304	13	333	2. 5. 13
305	2. 193. 241	334	281
306		335	2
307	2. 5³. 13. 29	336	17. 229. 29
308	5	337	2. 5. 41. 277
309	2	338	5. 73. 313
310	17	339	2. 37
311	2. 137	340	
312	5	341	2. 53
313	2. 5. 97. 101	342	5. 149. 157
314		343	2. 5². 13. 181
315	2	344	17
316	61	345	2
317	2. 5. 13	346	13
318	5³	347	2. 5

	Diuisores ipsius $aa+1$
348	5. 53
349	2
350	
351	2. 229. 269
352	5.
353	2. 5. 17
354	113
355	2. 61
356	13
357	2. 5^2
358	5
359	2. 13
360	41. 109. 29
361	2. 17
362	5
363	2. 5
364	37
365	2. 29
366	97
367	2. 5
368	5^2
369	2. 13
370	17
371	2
372	5. 13
373	2. 5
374	137
375	2
376	37

	Diuisores ipsius $aa+1$
377	2. 5. 61. 233
378	5. 17. 41^2
379	2
380	197
381	2. 181
382	5^2. 13
383	2. 5
384	
385	2. 13
386	
387	2 5. 17
388	5
389	2. 29
390	89
391	2
392	5. 73
393	2. 5^2
394	53. 101. 29
395	2. 13. 17. 353
396	
397	2. 5
398	5. 13
399	2
400	
401	2. 37. 41. 53
402	5
403	2. 5. 109. 149
404	17
405	2

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
406		435	2
407	2. 5^2	436	
408	5. 13^2. 197	437	2. 5. 13^2. 113
409	2	438	5. 17. 37. 61
410	97	439	2. 173
411	2. 13. 73. 89	440	
412	5. 17	441	2
413	2. 5. 37	442	5. 41
414	101	443	2. 5^4. 157
415	2	444	
416	61	445	2
417	2. 5	446	17
418	5^2. 29. 241	447	2. 5. 13. 53. 29
419	2. 41	448	5. 137. 293
420		449	2
421	2. 13. 17. 401	450	13. 37. 421
422	5	451	2
423	2. 5. 29	452	5. 29
424	13	453	2. 5
425	2	454	53
426	173	455	2. 17
427	2. 5	456	269
428	5	457	3. 5^2
429	2. 17	458	5
430		459	2
431	2. 293. 317	460	13. 41. 397
432	5^3	461	2
433	2. 5	462	5
434	13	463	2. 5. 13. 17. 97

464

	Diuisores ipsius $aa+1$
464	
465	2. 73
466	
467	2. 5. 113. 193
468	5^2
469	2. 109
470	
471	2
472	5. 17
473	2. 5. 13
474	
475	2. 37
476	13. 29
477	2. 5. 61. 373
478	5
479	2. 89
480	17
481	2. 29
482	5^2
483	2. 5. 41
484	73
485	2. 337 349
486	13
487	2. 5. 37
488	5
489	2. 13. 17
490	
491	2. 149
492	5

	Diuisores ipsius $aa+1$
493	2. 5^2
494	277
495	2. 101
496	
497	2. 5. 17
498	5. 193. 257
499	2. 13. 61. 157
500	53^2. 89
501	2. 41
502	5. 13
503	2. 5
504	389
505	2. 29
506	17
507	2. 5^2. 97
508	5.
509	2. 281. 461
510	29
511	2. 137
512	5. 13. 37. 109
513	2. 5
514	17
515	2. 13. 101^2
516	449
517	2. 5
518	5^2
519	2
520	317
521	2

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
522	5.	551	2. 13
523	2. 5. 17	552	5. 149. 409
524	37. 41. 181	553	2. 5
525	2. 13	554	13
526	337	555	2. 233
527	2. 5	556	
528	5. 13	557	2. 5^2. 17. 73
529	2	558	5
530	257	559	2
531	2. 17	560	61. 97
532	5^2	561	2. 37
533	2. 5	562	5. 181 349
534	29	563	2. 5. 29
535	2	564	13
536		565	2. 17. 41. 229
537	2. 5	566	457
538	5. 13. 61. 73	567	2. 5. 13
539	2. 29	568	5^2. 89. 29
540	17^2	569	2
541	2. 13	570	
542	5. 41	571	2
543	2. 5^2	572	5
544		573	2. 5
545	2	574	17
546	241	575	2
547	2. 5	576	
548	5. 17	577	2. 5. 13^2. 197
549	2. 37	578	5. 109
550	113	579	2

	Diuisores ipsius $aa+1$
580	13. 113 229
581	2
582	5^2. 17
583	2. 5. 41
584	
585	2. 137
586	37
587	2. 5
588	5
589	2. 89
590	13
591	2. 17
592	5. 29
593	2. 5^2. 13. 541.
594	
595	2
596	101
597	2. 5. 29
598	5. 37
599	2. 17. 61. 173
600	157
601	2. 313. 577
602	5
603	2. 5. 13
604	97
605	2. 197
606	13^2. 41. 53
607	2. 5^2
608	5. 17

	Diuisores ipsius $aa+1$
609	2
610	233
611	2. 73
612	5. 173. 433
613	2. 5. 53
614	277
615	2. 281
616	13. 17^2. 101
617	2. 5
618	5^2
619	2. 13
620	269
621	2. 61. 109. 29
622	5
623	2. 5. 37
624	41
625	2. 17
626	29
627	2. 5
628	5
629	2. 13
630	73
631	2
632	5^2. 13
633	2. 5. 17
634	
635	2. 37
636	
637	2. 5

	Diuifores ipfius $aa+1$
638	5
639	2
640	149
641	2
642	5. 13. 17. 373
643	2. 5^2
644	
645	2. 13
646	
647	2. 5. 41
648	5. 137. 613
649	2
650	17. 29
651	2. 313
652	5
653	2. 5
654	
655	2. 13. 569. 29
656	157
657	2. 5^2. 89. 97
658	5. 13
659	2. 17. 53. 241
660	37. 61. 193
661	2
662	5
663	2. 5. 113. 389
664	353
665	2. 41
666	53

	Diuifores ipfius $aa+1$
667	2. 5. 17
668	5^2. 13
669	2
670	593
671	2. 13
672	5. 37
673	2. 5
674	
675	2. 409. 557
676	17
677	2. 5
678	5. 89
679	2. 29
680	
681	2. 13
682	5^3. 61^2
683	2. 5
684	13. 17. 73. 29
685	2
686	
687	2. 5. 109. 433
688	5. 41
689	2
690	
691	2. 193
692	5
693	2 5^3. 12. 113
694	13
695	2

	Diuifores ipfius $aa+1$		Diuifores ipfius $aa+1$
696		725	2. 269
697	2. 5. 13. 37. 101	726	601
698	5	727	2. 5. 17
699	2	728	5
700		729	2. 41
701	2. 17. 97. 149	730	109
702	5	731	2. 397. 673
703	2. 5. 73. 677	732	5^2
704		733	2. 5. 29
705	2. 181	734	37
706	41	735	2. 17
707	2. 5^2. 13	736	13
708	5. 29	737	2. 5. 13
709	2. 37	738	5
710	13. 17	739	2
711	2	740	
712	5. 53	741	2. 293
713	2. 5. 29	742	5. 29
714		743	2. 5^2. 61. 181
715	2	744	17
716		745	2
717	2. 5. 101 509	746	13^2. 37. 89
718	5^2. 17	747	2. 5. 41
719	2. 53	748	5. 317. 353
720	13	749	2. 13
721	2. 61	750	
722	5. 137	751	2
723	2. 5. 13	752	5. 17
724	293	753	2. 5

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
754	97	783	2. 5. 37
755	2. 257	784	
756	521	785	2. 13. 137. 173
757	2. 5^2. 73. 157	786	17
758	5	787	2. 5. 241. 257
759	2. 13	788	5. 13. 41. 233
760		789	2. 149
761	2. 17	790	281
762	5. 13	791	2
763	2. 5	792	5
764		793	2. 5^2
765	2. 53	794	229
766	29	795	2. 17. 29. 641
767	2. 5. 89. 661	796	109
768	5^2	797	2. 5
769	2. 17	798	5. 13. 97. 101
770	41	799	2
771	2. 37. 277. 29	800	29^2. 761
772	5. 13. 53. 173	801	2. 13
773	2. 5	802	5. 197. 653
774	197	803	2. 5. 17
775	2. 13^2	804	61
776	73^2. 113	805	2. 457. 709
777	2. 5	806	113
778	5. 17	807	2. 5^4. 521
779	2	808	5. 37
780		809	2. 229
781	2.	810	509
782	5^2. 61. 401	811	2. 13. 41. 617

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
812	5. 17	841	2
813	2. 5. 157. 421	842	5
814	13	843	2. 5^2. 61. 233
815	2	844	757
816		845	2. 37
817	2. 5	846	17
818	5^2. 53. 101	847	2. 5
819	2	848	5
820	17. 37	849	2. 73
821	2	850	13. 149. 373
822	5. 337. 401	851	2. 97
823	2. 5	852	5. 41
824	13. 29	853	2. 5. 13. 29. 193
825	2. 53	854	17
826		855	2
827	2. 5. 13	856	89
828	5	857	2. 5^2. 37. 397
829	2. 17^2. 29. 41	858	5. 29
830	73	859	2. 137
831	2. 449. 769	860	
832	5^2	861	2
833	2. 5	862	5
834	349	863	2. 5. 13. 17. 337
835	2. 89	864	
836	701	865	2. 61
837	2. 5. 13. 17. 317	866	13
838	5	867	2. 5
839	2. 109	868	5^2
840	13	869	2

	Diuifores ipfius $aa+1$		Diuifores ipfius $aa+1$
870	41	899	2. 101
871	2. 17. 53. 421	900	241
872	5	901	2
873	2. 5	902	5. 13
874	461	903	2. 5. 73
875	2	904	61
876	13	905	2. 13. 17^2. 109
877	2. 5	906	
878	5. 53	907	2. 5^2
879	2 13	908	5
880	17	909	2
881	2	910	
882	5^2. 29^2. 37	911	2. 41. 349. 29
883	2. 5	912	5
884	193	913	2. 5
885	2	914	17. 157. 331
886	181	915	2. 13^2
887	2. 5. 29	916	29
888	5. 17	917	2. 5
889	2. 13. 113. 269	918	5^2. 13.
890		919	2. 37. 101. 113
891	2. 277	920	
892	5. 13	921	2
893	2. 5^2. 41. 389	922	5. 17. 73. 137
894	37	923	2. 5
895	2. 97	924	53. 89. 181
896	281	925	2
897	2. 5. 17	926	61
898	5	927	2. 5

928

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
928	5. 13	957	2. 5^2. 13
929	2	958	5. 173
930		959	2
931	2. 13. 17. 37. 53	960	
932	5^3	961	2. 409
933	2. 5	962	5
934	41	963	2. 5
935	2	964	313
936		965	2. 17. 61. 449
937	2. 5	966	
938	5. 149	967	2. 5. 13
939	2. 17	968	5^2. 37
940	29	969	2. 29
941	2. 13	970	13. 157. 461
942	5	971	2. 197
943	2. 5^3	972	5
944	13^2	973	2. 5. 17
945	2. 89. 173. 29	974	29
946		975	2. 41
947	2. 5	976	73
948	5. 17. 97. 109	977	2. 5. 53
949	2	978	5
950		979	2
951	2	980	13
952	5. 41	981	2
953	2. 5	982	5^2. 17
954	13	983	2. 5. 13
955	2	984	53
956	17. 37	985	2

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
986		1015	2. 373
987	2. 5. 61	1016	17. 41
988	5	1017	2. 5. 293. 353
989	2	1018	5^2
990	17	1019	2. 13
991	2	1020	101
992	5. 97	1021	2. 233
993	2. 5^2. 13. 37. 41	1022	5. 13
994	269	1023	2. 5. 229. 457
995	2. 73	1024	17
996	13. 137. 557	1025	2
997	2. 5	1026	61
998	5. 29	1027	2. 5. 29
999	2. 17. 149. 197	1028	5. 241. 877
1000	101	1029	2
1001	2	1030	37. 53. 541
1002	5. 113	1031	2
1003	2. 5. 29	1032	5^2. 13. 29. 113
1004		1033	2. 5. 17
1005	2. 37	1034	41. 89. 293
1006	13	1035	2. 13
1007	2. 5^2. 17	1036	
1008	5	1037	2. 5 53
1009	2. 13	1038	5. 229. 941
1010		1039	2
1011	2	1040	617
1012	5. 257. 797	1041	2. 17
1013	2. 5. 89	1042	5. 37
1014	109	1043	2. 5^2

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
1044	257	1073	2. 5
1045	2. 13. 97. 433	1074	13
1046	193	1075	2. 17. 41. 829
1047	2. 5	1076	233
1048	5. 13. 61. 277	1077	2. 5. 193. 601
1049	2. 73	1078	5
1050	17	1079	2. 37
1051	2	1080	773
1052	5. 389. 569	1081	2
1053	2. 5	1082	5^2
1054		1083	2. 5. 53
1055	2	1084	13^2. 17. 409
1056	29	1085	2. 29
1057	2. 5^3. 41. 109	1086	733
1058	5. 13. 17. 1013	1087	2. 5. 13. 61. 149
1059	2. 137	1088	5
1060		1089	2. 97
1061	2. 13. 29	1090	29. 53
1062	5	1091	2
1063	2. 5	1092	5. 17
1064	857	1093	2. 5^2
1065	2. 317	1094	
1066		1095	2
1067	2. 5. 17. 37. 181	1096	
1068	5^5. 73	1097	2. 5. 13
1069	2	1098	5. 41
1070		1099	2
1071	2. 13. 157. 281	1100	13
1072	5	1101	2. 17. 101. 353

1102

	Diuiſores ipſius $aa+1$		Diuiſores ipſius $aa+1$
1102	5. 89	1131	2. 173
3	2. 5	32	5^2
4	37	33	2. 5. 137. 937
5	2. 181	34	541
6		35	2. 17
7	2. 5^2	36	13. 53
8	5	37	2. 5
9	2. 17. 61. 593	38	5
1110	13	39	2. 13. 41
11	2	1140	
12	5	41	2. 37. 73. 241
13	2. 5. 13^2. 733	42	5. 97
14	29	43	2. 5^2. 17. 29. 53
15	2. 113	44	
16	37. 41. 821	45	2. 113
17	2. 5	46	
18	5^2. 17^2. 173	47	2. 5
19	2. 29	48	5. 29. 61. 149
1120	433	49	2. 13
21	2. 101	1150	
22	5. 73	51	2
23	2. 5. 13. 89. 109	52	5. 13. 17
24		53	2. 5. 37
25	2	54	317
26	13. 17	55	2
27	2. 5. 157. 809	56	
28	5. 397. 641	57	2. 5^2. 41. 653
29	2	58	5. 269. 997
1130	577	59	2. 337

	Diuisores ipsius $aa+1$
1160	17
61	2
62	5. 13
63	2. 5
64	1061
65	2. 13
66	109
67	2. 5
68	5^2. 197. 277
69	2. 17
1170	61
71	2
72	5. 29
73	2. 5
74	
75	2. 13
76	
77	2. 5. 17. 29. 281
78	5. 13. 37. 577
79	2
1180	41
81	2
82	5^3
83	2. 5. 349. 401
84	
85	2
86	17. 97. 853
87	2. 5
88	5. 13

	Diuisores ipsius $aa+1$
89	2. 53
1190	37
91	2. 13. 89. 613
92	5
93	2. 5^2
94	17^2
95	2. 73
96	53. 137. 197
97	2. 5
98	5. 41
99	2
1200	337
1	2. 13. 29
2	5. 101
3	2. 5. 17
4	13
5	2
6	29
7	2. 5^2
8	5
9	2. 61
1210	
11	2. 17
12	5. 89
13	2. 5
14	13. 73
15	2. 37
16	661
17	2. 5. 13

a	Diuisores ipsius $aa+1$	a	Diuisores ipsius $aa+1$
18	5^2	47	2. 5
19	2	48	5. 181
1220	17	49	2. 53
21	2. 41	1250	1201
22	5. 101	51	2
23	2. 5. 373. 401	52	5. 37^2. 229
24	569	53	2. 5. 13^2. 929
25	2	54	17. 233. 397
26	509	55	2
27	2. 5. 13. 37. 313	56	13
28	5. 17. 113. 157	57	2. 5^2
29	2. 773. 977	58	5. 113
1230	13. 29	59	2. 29
31	2. 61	1260	349
32	5^2. 109. 557	61	2. 613
33	2. 5	62	5. 17. 41. 457
34		63	2. 5. 269. 593
35	2. 29	64	29. 37
36	149	65	2
37	2. 5. 17	66	13
38	5	67	2. 5. 229. 701
39	2. 41. 97. 193	68	5^2. 73. 881
1240	13	69	2 13 241. 257
41	2	1270	61. 137. 193
42	5. 53	71	2. 17
43	2. 5^2. 13	72	5
44		73	2. 5
45	2. 17	74	
46		75	2. 109

	Diuisores ipsius $aa+1$		Diuisores ipsius $aa+1$
1276		5	2. 13. 17
77	2 5. 313 521	6	
78	5	7	2. 5^{3}
79	2. 13. 17	8	5. 13
1280	41. 89. 449	9	2. 233
81	2	1310	293
82	5^{2}. 13^{2}. 389	11	2
83	2. 5. 97	12	5
84	157	13	2. 5. 17
85	2	14	
86	181	15	2
87	2. 5. 73	16	
88	5. 17. 29. 673. 1033	17	2. 5. 29
89	2. 37	18	5^{3}. 13
1290		19	2. 509
91	2. 173	1320	
92	5. 13. 61	21	2. 13. 41
93	2. 5^{2}. 29. 1153	22	5. 17. 29. 709
94		23	2. 5. 101
95	2. 13. 53. 1217	24	
96	17	25	2. 277
97	2. 5. 149. 1129	26	37
98	5	27	2. 5. 293. 601
99	2	28	5. 521. 677
1300	809	29	2
1	2. 37 89. 257	1330	17
2	5 53	31	2. 13. 61. 1117.
3	2. 5. 41^{2}. 101	32	5^{2}
4	173	33	2. 5. 137. 1297

	Diuisores ipsius $aa+1$
34	13
35	2. 461
36	97
37	2. 5
38	5. 37
39	2. 17
1340	
41	2. 73. 109. 113
42	5
43	2. 5^2
44	13. 41
45	2
46	29
47	2. 5. 13. 17. 821
48	5. 53
49	2
1350	
51	2. 29
52	5. 281. 1301
53	2. 5. 61
54	
55	2. 53
56	17
57	2. 5^2. 13
58	5
59	2
1360	13. 73
61	2
92	5. 41

	Diuisores ipsius $aa+1$
63	2. 5. 37
64	17
65	2. 197
66	
67	2. 5
68	5^2
69	2. 89
1370	13. 353 409
71	2. 113
72	5
73	2. 5. 13. 17. 853
74	
75	2. 29. 37. 881
76	
77	2, 5
78	5
79	2. 797 1193
1380	29. 97. 677
81	2. 17
82	5^2. 241. 317
83	2. 5. 13
84	109
85	2. 41. 149. 157
86	13
87	2. 5
88	5. 373
89	2
1390	17. 89. 1277
91	2

	Diuifores ipfius $aa+1$		Diuifores ipfius $aa+1$
1392	5. 61	1421	2
93	$2. 5^2. 197^2$	22	$5. 13^2$
94		23	2. 5
95	2. 953	24	17. 101. 1181
96	13	25	2. 13
97	2. 5	26	41
98	5. 17	27	2. 5. 269. 757
99	2. 13	28	5. 617. 661
1400	37	29	2. 181
1	2. 53	1430	
2	5	31	2. 461
3	2. 5. 41	32	$5^4. 17. 193$
4	29. 101. 673	33	2. 5. 29. 73. 97
5	2	34	
6		35	2. 13
7	$2. 5^2. 17^2. 137$	36	641
8	5. 53	37	2. 5. 37
9	2. 13. 29	38	5. 13. 29. 1097
1410		29	2
11	2	1440	
12	5. 13. 37. 829	41	2. 17. 157. 389
13	2. 5	42	5
14	61. 73. 449	43	$2. 5^3$
15	2. 17	44	41
16		45	2. 277
17	2. 5	46	149
18	5^2	47	2. 5
19	2	48	5. 13
1420		49	2. 17. 37

	Diuifores ipfius $aa+1$
1450	109
1	2. 13^2
2	5
3	2. 5. 61
4	53 113. 353
1455	2. 653
6	
7	2. 5^2
8	5. 17. 89. 281
9	2
1560	
1	2. 13. 53
2	5. 29
3	2. 5. 193. 1109
4	13. 173. 953.
1465	2
6	17
7	2. 5. 29. 41. 181
8	5^2
9	2
1470	137
1	2. 317
2	5
3	2. 5
4	13. 37
1475	2. 17. 61. 1049

	Diuifores ipfius $aa+1$
6	769
7	2. 5. 13. 97. 173
8	5. 433. 1009
9	2. 89
1480	457
1	2. 229
2	5^2
3	2. 5. 17^2. 761
4	113
1485	2. 41
6	37^2
7	2. 5. 13. 73. 233
8	5
9	2
1490	13. 313
1	2. 29
2	5. 17
3	2. 5^2. 109. 409
4	
1495	2
6	29. 229. 337
7	2. 5
8	5
9	2
1500	13. 17