290

Christianus
Frenelius

220

DE LATERI-
BVS ET ANGVLIS TRI-
angulorum, tum planorum rectilineorum,
tum Sphæricorum, libellus eruditissimus
& utilissimus, cum ad plerasque Pto-
lemæi demonstrationes intelligen-
das, tum uero ad alia multa,
scriptus à Clarissimo &
doctissimo uiro D. Ni-
colao Copernico
Toronensi.

Additus est Canon semissium subten-
sarum rectarum linearum
in Circulo.

Excusum Vittembergæ per
Iohannem Lufft.
Anno. M. D. XLII.

DOCTRINA ET

VIRTVTE PRAESTANTI

Georgio Hartmano Noribergensi, Ioachi-
mus Rheticus S. D.

CVM rerum humanarum inconstantiam,
uarios casus summorum uirorum, regno-
rum mutationes considero, cum in cæteris
rebus imbecillitatem humani generis de-
ploro, tum uero maxime doleo etiam in ar
tes diuinitus humano generi traditas fata
temporum seuire. Olim studia frequen-
tissima Mathematum fuerunt, tota ars ex fundamentis
mira solertia, Deo monstrante initia & regente artificum
mentes, extructa est, magna lux, magnus honos huius do-
ctrinæ fuit, Postea multis seculis iacuit obruta tenebris, for
tasse eó quód in hac ultima mundi senecta orbis terrarum
Barbarorum imperijs fato quodam oppressus est. Sed quia
artes uitæ utiles, præcipua Dei dona sunt, res ipsa ostendit,
non humana ope, sed quodam singulari Dei beneficio, ut-
cunq eas conseruari, & interdum rursus ceu flammam ex
citari, ne funditus intereant. Sed etiam cum restitutæ sunt,
prorsus accidit hominibus, quod aiunt Pythagoram dixis-
se de cœlestium motuum harmonia, qua ille quidem dixit
effici dulcissimos sonos, sed non audiri eos, quia iam pro-
pter consuetudinem negligantur, ita surdi homines nec au
diunt, nec tueri student artes diuinitus nobis redditas. Et
ut cetera præsentia bona fastidimus, ita & hanc doctrinam,
cum fruimur quotidianis beneficijs, leuiorem ducimus. Si
deesset annorum enumeratio in historijs, in relligionibus,
in foro, qnantæ essent in uita tenebræ. Si numerorum do-
ctrinam non haberemus, infinita esset legitimorum côtra-

A ij   ctuum

ctuum conturbatio. Architectonica tota ex Geometria or
ta est, & sunt aliæ utilitates multæ in metiendis corporibus.
Hæc beneficia cum sint in manibus fontes tum negligun-
tur, tum uero a multis superbe contemnuntur. Itaque ma-
gna gratia debetur bonis uiris, qui in tanto doctrinæ con-
temptu, sponte laborem suscipiunt & sumptus faciunt, in
his diuinis artibus excolendis & utilitatis publicæ causa con
seruandis. Cum autem nobis monumenta utilia istic tum
edantur, tum adornentur, duxi hoc te munere uicissim or-
nandum esse, quod non dubito tibi gratissimum fore. Scis
doctrinam Triangulorum maximos usus habere, cum in
alijs geometricis materijs, tum uero præcipue in Astrono=
mia, ideoꝗ sæpe in eam Ptolemæus incurrit. Quare & hi
qui Ptolemæum explicare conati sunt, multa de Triangu-
lis commentati sunt. Et optarim extare ueteres Mene-
laum & Theodosium. Nunc recens prodijt lucubratio Re-
giomontani, sed multo ante quam hanc uidere potuit uir
Clarissimus & doctissimus D. Nicolaus Copernicus, dum
& in Ptolemæo illustrando, & in doctrina motuum traden
da elaborat, de Triangulis eruditissime scripsit. Scio tibi
admirationi fore hoc scriptum, cum uidebis, quantas res,
quàm artificiose complexus sit. Vt autem hoc tempore
ederem, eó accidit, quia in enarratione Ptolemæi nobis
opus fuit Triangulorum doctrina, tibiꝗ eó dedicaui, ut te
prouocarem ad edenda, siqua in hoc genere habes, seu ue
tera, seu recentia. Huc accedit, quod audio amicitiam ti-
bi Romæ fuisse cum autoris fratre. Sed tibi uiro doctissimo
non minor est causa quam hæc ad amandum autorem,
acerimum ipsius ingenium, & cum in cæteris artibus, tum
maxime in doctrina coelesti eruditio tanta ut ueteribus
summis artificibus conferri possit. Ac gratulari huic ætati
debemus, tantum artificem reliquum esse, qui studia ali-
quorum accendat & adiuuet. Mihi quidem iudico rem
nullam humanam contigisse meliorem, quam talis uiri &
doctoris consuetudinem. Ac si quid unquam mea opera

                                                          in

in hoc genere Reipublicæ profutura est, ad cuius utilita-
tem studia nostra referenda sunt, huic doctori acceptum re
ferri uolo. Itaꝗ cum hanc lucubrationem & ingeniosissime
scriptum esse sciam, & ego eam propter autoris me-
moriam magnifaciam, uelim te hoc mu-
nere magnopere
delectari.
Bene vale.

Has artes teneris annis studiosa Iuuentus
  Discito , Mensuras quæ numeros⁊ docent.
Premia nanque feres suscepti magna laboris ,
  Ad cœlum monstrant hæctibi scripta uiam .
Qua patet immensis spacijs pulcherrimus orbis,
  Si metas horum cernere mente uoles .
Sidera uel quanam cœli regione uagentur ,
  AEterni cursus quas habeant⁊ uices .
Cur Luna inuoluat cæca caligine fratrem ,
  Cur Lunæ usuram lucis & ille neget
Venturos etiam casus quæ fata gubernent
  Quas populis clades astra inimica ferant
Hęc si nosse uoles, prius est doctrina tenenda,
  Quam breuirer tradunt hæc elementa tibi .
Cunq⁊ hominū mentes, quæ cœlo semina ducunt,
  Errent a patria sede domo⁊ procul,
Hæc doctrina ipsas terrena mole solutas
 Cœlesti reduces rursus in arce locat.

DE LATERIBVS
ET ANGVLIS TRIANGV
lorum planorum rectilineorum.

I.

RIANGVLI datorum angulorum dan
tur latera. Sit, inꝗ, triangulum a b c,
cui per quintum problema quarti Eu-
clidis circumſcribatur Circulus. Erunt
igitur & a b, b c, c a circunferentiæ da-
tæ, eo modo, quo ccclx. partes ſunt duo-
bus rectis æquales. Datis autem circum
ferentijs dantur etiam latera trianguli
inſcripti circulo tanquam ſubtenſæ, per expoſitum Cano-
nem, in partibus, quibus dimetiens aſſumpta eſt 2000000.
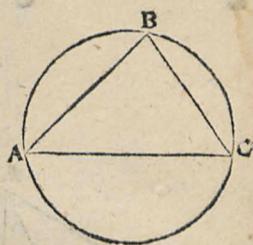
II.

Si uero cum aliquo angulorum duo trianguli latera fue
rint data, & reliquum latus cum reliquis angulis cognoſce
tur. Aut enim latera data æqualia ſunt aut inæqualia, Sed
angulus datus aut rectus eſt, aut acutus, uel obtuſus. Ac rur
ſus latera data datum angulum uel comprehendunt, uel
non comprehendunt. Sint ergo primum in triangulo
a b c duo latera a b & a c data æqualia, quæ angulum a
datum comprehendunt. Cæteri igitur, qui ad baſim b c
cum ſint æquales, etiam dantur, uti dimidia reſidui ipſius a,
è duobus rectis. Et ſi qui circa baſim angulus primitus fue
rit datus, datur mox ipſi compar, atque ex his duorum re-
ctorum reliquus. Sed datorum angulorum trianguli dan
tur latera, datur & ipſa b c baſis, ex Canone in partibus
quibus a b uel a c tanquam ex centro fuerit 1000000 partium
ſiue demetiens 2000000. partium.
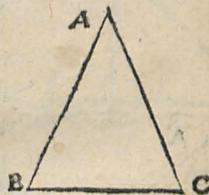
III.

Quod ſi angulus, qui ſub b a c rectus fuerit datis cõpre
henſus lateribꝰ, idem eueniet. Quoniam liquidiſsimũ eſt, ꝙ
quę ex a b & a c fiunt quadrata, æqualia ſunt ei, quod a baſi
b c, datur ergo longitudine b c, & ipſa latera inuicem ra-
tione
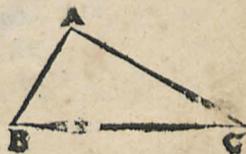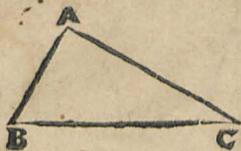
tione. Sed fegmentũ circuli quod orthogonũ fufcipit trian
gulum, femicirculus eft, cuius b c bafis dimetiens fuerit. Qui
bus igitur b c partibus fuerit 2000000. dabuntur a b & a c, tan
quam fubtendentes reliquos angulos b c. Quos idcirco ra
tio Canonis patefaciet in partibus, quibus ccclx funt duo_
bus rectis æquales. Idem eueniet, fi b c fuerit datum cum
altero rectum angulum comprehendentium, quod iam li-
quide conftare arbitror.

IIII.
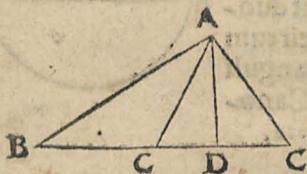
Sit iam datus, qui fub a b c angulus acutus,
datis etiam comprehenfus lateribus a b & b c,
& ex a figno defcendat perpendicularis ad b c
productam fi oportuerit, prout intra uel extra
triangulum cadat, quæ fit a d, per quam difcer
nuntur duo orthogonij a b d & a d c, & qm̃
in a b d dantur anguli, nam d rectus & b per
hypothefim. Dantur ergo a d & b d tanquam
fubtendentes angulos a & b in partibus, quibus
a b eft 2000000. dimetiens circuli per canonem. Et eadem ra
tione qua a b dabatur longitudine, dantur a d & b d fi_
militer, datur etiam c d, qua b c & b d fe inuicem excedunt.
Igitur & in triangulo rectangulo a d c datis lateribus a d
& c d, datur latus quæfitum a c & angulus a c d per præce_
dentem demonftrationem.

V.
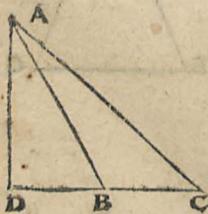
Nec aliter eueniet, fi b angulus fuerit obtufus, quoniam
ex a figno in b c extenfam rectam lineam perpendicularis
acta a d, efficit triangulum a b d datorum angulorum.
Nam a b d angulus exterior ipfi a b c datur, & d rectus,
dantur ergo b d & a d in partibus, quibus a b fuerit 2000000.
Et quoniam b a & b c rationem habent inuicem datam,
datur ergo & a b earundem partium, quibus b d ac totæ
c b d. Idcirco & in triangulo rectangulo a d c, cum data
fint duo latera a d & c d, datur etiam a c quæfitum, & an_
gulus b a c cum reliquo a c b, qui quærebatur.

VI.

Sit iam alterutrum datorum laterum fubtendens angu_
lum

lum b datum, quod ſit a c cum a b, datur ergo per Cano
nem a c in partibus, quibus eſt dimetiens circuli circum-
ſcribentis triangulum a b c partium 2000000. & pro ra-
tione data ipſius a c, ad a b, datur in ſimilibus partibus
a b, atque per canonem, qui ſub a c b angulus cum reli-
quo b a c angulo, per quem etiam c b ſubtenſa datur, qua
ratione data, dantur quomodolibet magnitudine.

VII.

Datis omnibus trianguli lateribus dantur anguli.
De Iſopleuro notius eſt, quam ut indicetur, quod ſinguli
eius anguli trientem obtineant duorum rectorum. In Iſoſ-
celibus quoq; perſpicuum eſt. Nam æqualia latera ad ter-
tium ſunt, ſicut dimidia diametri ad ſubtendentem circum
ferentiam, per quem datur angulus æqualibus comprehen
ſus lateribus ex Canone, quibus circa centrum ccclx ſunt
quatuor rectis æquales, deinde cæteri anguli qui ad baſim
etiam dantur è duobus rectis tanquam dimidia. Super-
eſt ergo nunc & in ſcalenis triangulis id demonſtrari, quos
ſimiliter in orthogonios partiemur. Sit ergo triangu-
lum ſcalenum datorum laterum a b c, & ad latus, quod lon
giſsimum fuerit, utputa b c, deſcendat perpendicularis
a d. Admonet aũt nos xiij. ſecundi Euclidisq; a b latus quod
acutum ſubtendit angulum minus ſit poteſtate cæteris
duobus lateribus, in eo quod fit ſub b c & c d bis. Nam
acutum angulum c eſſe oportet, euenietalioqui & a b lon
giſsimum eſſe latus contra hypotheſim, quod ex xvij. pri-
mi Euclidis & duabus ſequentibus licet animaduertere.
Dantur ergo b d & d c, & erunt orthogonia a b d &
a d c datorum laterum & angulorum, ut iam ſæpius eſt re
petitum, quibus etiam conſtant anguli trianguli a b c quæ-
ſiti.
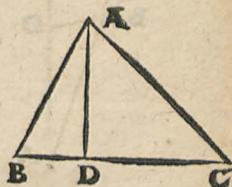
Aliter. Itidem commodius forſitan penultima. tertij
Euclidis nobis exhibebit, ſi per breuius latus, quod ſit b c
facto c centro, interuallo autem b c, deſcripſerimus cir-
culum, qui ambo latera quæ ſuperſunt, uel alterum eo-
rum ſecabit. Secet modo utrumq; a b in e ſigno & a c
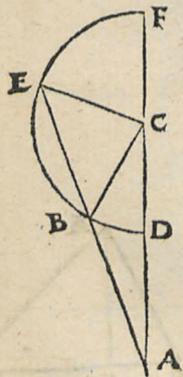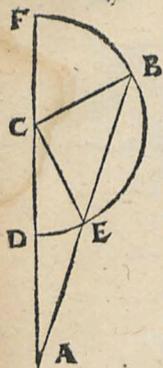
in d porrecta etiam linea a d c in f signum ad complen-
dum diametrum d c f. His ita præstructis manifestum est
ex illo Euclideo præcepto. Quoniam quod sub f a d æqua
le est ei, quod sub b a e, cum sit utrunq́ æquale quadrato li
neæ quæ ex a circulum contingit. Sed tota a f data est,
cum sint omnia ipsius segmenta data, nempe c f, c d, æqua-
lia ipsi b c, quæ sunt ex centro ad circumcurrentem, & a d
qua c a ipsam c d excedit. Quapropter & quod sub b a e
datum est, & ipsa a e longitudine cum reliqua b e subten-
dente circumferentiam b e, Connexa e c, habebimus tri-
angulum b c e Isosceles datorum laterum. Datur ergo an
gulus e b c. Hinc & in triangulo a b c reliqui anguli c & a
per præcedentia cognoscentur. Non secet autem circu-
lus ipsam a b, ut in sequenti figura, ubi a b in conuexam
circumferentiam cadit, erit nihilominus b e data, & in tri
angulo b c e Isoscele angulus c b e datus, & ex-
terior, qui sub a b c. ac eodem prorsus argu
mento demonstrationis quo prius
dantur anguli reliqui.
Et hæc de triangulis rectilineis dicta suffi-
ciant, in quibus magna pars
Geodesiæ consistit.
Nunc ad Sphærica
conuertamur.

DE

DE TRIANGVLIS
SPHAERICIS.

TRIangulum conuexum hoc loco accipimus eum, qui tribus maximorum circulorum circumferentijs in superficie Sphærica côtinetur. Angulorum uero differentiam & magnitudinem penes circumferentiam maximi circuli, qui in puncto sectionis tanq̃ polo describitur, quamque circumferentiam circulorum quadrantes angulum comprehendentes interceperunt. Nam qualis est circumferentia sic intercepta ad totam circumcurrentem, talis est angulus sectionis ad quatuor rectos, quos diximus ccclx. partes æquales continere.   I.

Si fuerint tres circumferentiæ maximorum circulorum sphæræ, quarum duæ quælibet simul iunctę, tertia fuerint longiores, ex his triangulum componi posse sphæricum perspicuum est. Nam quod hic de circumferentijs proponitur, xxiij. vndecimi libri Euclidis demonstrat de angulis, cum sit eadem ratio angulorum & circumferentiarum, & circuli maximi sunt qui per centrum sphæræ, patet, q̃ tres illi circuloru̅ sectores, quoru̅ sunt circumferentiæ, apud centrum sphærę angulum constituunt solidum. Manifestum est ergo quod proponitur.

II.

Quamlibet circumferentiam trianguli hemicyclio minorem esse oportet. Hemicyclium enim nullum angulum circa centrum efficit, sed in lineam rectam procumbit. At reliqui duo anguli, quorum sunt circumferentiæ, solidum in centro concludere nequeunt.   Proinde neque triangulum sphæricum. Et hanc fuisse causam arbitror, cur Ptolemęus in huiusce generis triangulorum explanatione, præsertim circa figuram sectoris sphærici protestetur, ne assumptæ circumferentię semicirculo maiores existant.   III.

IN Triangulis Sphæricis rectum habentibus angulum, subtendens duplum lateris, quod recto opponitur

angulo, ad ſubtenſam duplo alterius rectum angulum cō-
prehendentium, eſt, ſicut dimetiens Sphæræ ad eam, quæ
duplum anguli ſub reliquo & primo lateribus comprehen
ſi in maximo Sphæræ circulo ſubtendit.

Eſto nanque triangulum Sphæricum a b c, cuius c an
gulus rectus exiſtat. Dico quod ſubtenſa dupli a b ad ſub-
tenſam dupli b c eſt ſicut dimetiens Sphæræ, ad eam quæ
in maximo circulo duplum anguli b a c ſubtendit. Facto
in a polo, deſcribatur circumferentia maximi circuli d e,
& compleantur quadrantes circulorum a b d & a c e.
Et ex centro Sphæræ f agantur comunes circulurum ſe-
ctiones f a ipſorum a b d & a c e, ipſorum autem a c e
& d e ſit f e, atque f d ipſorum a b d & d e. Inſuper & f c
circulorum a c & b c. Deinde ad angulos rectos agantur
b g ipſi f a, b i ipſi f c, & d k ipſi f e, & connecta-
tur g i.

Quoniam igitur ſi circulus circulum per polos
ſecat, ad angulos rectos ipſum ſecat, erit angulus
qui ſub a e d comprehenditur rectus, & a c b per
hypotheſim, & utrumq; planum e d f, & b c f
rectum ad ipſum a e f. Quapropter ſi ex ſigno
ipſi f k e communi ſegmento ad rectos angulos
in ſubiecto plano recta linea excitaretur, com-
prehendet quoq; cum k d angulum rectum, per recto-
rum ad inuicem planorum definitionem. Quapropter
etiam ipſa k d per iiij. vndecimi Euclidis ad a e f recta
eſt. Ac eadem ratione b i ad idem planum erigitur, & id-
circo adinuicem ſunt d k & b i per vi. eiuſdem. Verum eti-
am g b, ad f d, eo ꝙ f g b, & g f d anguli ſunt recti, erit per
x. vndecimi Euclidis, angulus f d K ipſi g b i æqualis. At qui
ſub f k d rectus eſt, & g i b per definitionem erectæ lineæ.
Similium igitur triangulorum proportionalia ſunt late-
ra, & ut d f ad b g, ſic d k ad b i. At b i eſt dimidia ſubten-
dantis duplum c b circumferentiam, quoniam ad angulum
rectum eſt, ad eam, quæ ex centro f, & eadem ratione b g
dimidia

dimidia subtendentis duplum latus b a,& d k´semissis sub-
tendentis duplam d e, siue angulum dupli a, atque d f di
midia diametri sphæræ. Patet igitur quod subtensa dupli
ipsius a b, ad subtensam dupli b c, est sicut dimetiens ad
eam quæ duplum anguli a siue interceptę circumferentię
d e subtendit, quod demonstrasse fuerit opportunum.

IIII.

In quocunque triangulo rectum angulum habente,
alius insuper angulus fuerit datus, cum quolibet latere, re-
liquus etiam angulus cum reliquis lateribus dabitur.
Sit enim triangulum a b c habens angulum a rectum, &
cum ipso etiam alterutrum utputa b datum. De latere uero
dato trifariam ponimus diuisionem, aut enim fuerit, qui
datis adiacet angulis, ut a b, aut recto tantum, ut a c, aut
qui opponitur recto, ut b c. Sit ergo primum a b latus da
tum, & facto in c polo describatur circumferentia maxi-
mi circuli d e, & completis quadrantibus c a d & c b e,
producantur a b & d e donec se inuicem secent in f signo.
Erit ergo uicissim in f polus ipsius c a d, eo ꝗ circa a & d
sunt anguli recti. Et quoniam si in sphæra maximi orbes
ad rectos sese inuicem secuerint angulos, bifariam & per
polos se iuuicem secant. Sunt ergo & a b f & d e f
quadrantes circulorum, cumꝗ data sit a b, datur &reliqua
quadrantis b f, & angulus e b f ad uerticem ipsi a b c da
to æqualis. Sed per præcedentem demonstrationem sub-
tensa dupli b f ad subtendentem dupli e f, est sicut dime-
tiens sphæræ ad subtendentem duplum anguli e b f. |Sed
tres earum datæ sunt, dimetiens sphæræ, duplę b f, atꝗ an
guli dupli e b f, siue semisses ipsorum. Datur ergo per xvi.
sexti Euclidis etiam dimidia subtendentisduplam e f per
canonem ipsa e f circumferentia, & reliqua quadrantis
d e, siue angulus c quæsitus. Eodem modo ac uicissim
sunt subtensæ duplicium d e ad a b, & e b c ad c b. Sed
tres iam datæ sunt d e, a b, & e b c quadrantes circuli, da-
tur ergo & quarta subtendens duplum c b, & ipsum latus
c b quæsitum. Et quoniam subtensæ duplicium sunt ipso-

B iij rum
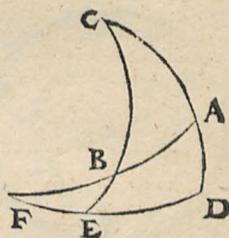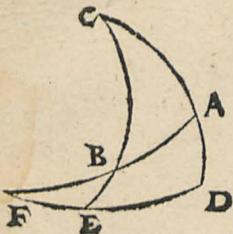
rum cb ad ca, & b f ad e f. Quoniam utrorū́q̃ sunt ratio
nes sicuti dimetientis sphæræ ad subtensam duplo c b a an
gulo, & quæ vni eædem sunt rationes, sibi inuicem sunt eæ-
dem. Tribus iam igitur datis b f e f & cb datur quarta c a,
& ipsum c a tertium latus trianguli a b c. Sit iam a c la
tus assumptum in datis, propositumq̃ sit inuenire a b &
b c latera, cum reliquo angulo c, habebit rursum permu-
tatim subtensa dupli c a ad subtensam dupli c b eandem
rationem, quam subtendens duplum a b c angulum ad
dimetientem, quibus c b latus datur & reliqua a d & b e
ex quadrantibus circulorum. Ita rursus habebimus ut sub-
tensam dupli a d ad subtensam dupli b e, sic subtensam du
pli a b f, & est dimetiens, ad subtensam dupli b f. Datur
ergo b f circumferentia, quodq̃ superest a b latus. Simili
ratione ut in præcedentibus ex subtendentibus dupla b c,
a b & f b e, datur subtensa dupli d e, siue angulus c reli-
quus. Porro si b c fuerit in assumpto, dabitur rursus ut an
tea a c & reliquæ a d & b e, quibus per subtensas rectas
lineas, & diametro, ut sæpe dictum, datur b f circum-
ferentia & reliquū a b latus, ac subinde iuxta p̃cedens Theo
rema, per b c, a b, & c b e datas proditur e d circum-
ferentia, angulus videlicet c reliquus, quem quærebamus.
Sicq̃ rursus in triangulo a b c duobus angulis a & b, da
tis, quorum a rectus existit cum aliquo trium laterum da-
tus est angulus tertius cum reliquis duobus lateribus, quod
erat demonstrandum.

V.

Trianguli datorum angulorū, quorum aliquis rectus fue
rit, dantur latera. Manente adhuc præcedente figura, vbi
propter angulum e datum, datur d e circumferentia, &
reliqua e f ex quadrante circuli. Et quoniam b e f est an
gulus rectus, eo quod b e descendit à polo ipsius d e f, &
qui sub e b f angulus, est ad uerticem dato. Triangulum
igitur b e f rectum angulū e habens, & insuper b datum
cum latere e f, datoꝛ est angulorum & laterum per Theo
rema præcedens, datur ergo b f, & reliqua ex quadrante
a b, ac itidem in triangulo a b c reliqua latera a c & b c
dari per præcedentia demonstratur.   Si

VI.

Si in eadem sphæra bina triangula rectum angulum
ac insuper alium æqualem habuerint, alteri ũ alteri, unumᶜ⅁
latus vni lateri æquale, siue quod æqualibꝰ adiacet angulis,
siue quod alterutro æqualium angulorum opponitur, reli
qua quoᴄⱫ latera, reliquis lateribus, æqualia alterum alteri,
ac angulum angulo, reliquum reliquo æqualem habebunt.
Sit hemispherium a b c, in quo suscipiantur bina triangu-
la a b d & c e f, quorum anguli a & c sint recti, & præte-
rea angulus a d b æqualis ipsi c e f, vnumᴄⱫ latus uni la
teri, & primum quod æqualibus ipsis adiacet angulis, hoc
est, a d ipsi c e. Aio latus quoᴄⱫ a b lateri c f, & b d ipsi e f,
ac reliquum angulum a b d reliquo c f e, esse æqualia.
Sumptis enim in b & f polis, describantur maximorum
circuloᴙ quadrantes g h i & i k l, compleanturᴄⱫ a d i
& c e i, quos seinuicem secare necesse est in polo hemisphe
rij, qui sit in i signo, eo quod anguli circa a & c sunt recti,
atᴄⱫ quod g h i & c e i per polos ipsius a b c circuli
sunt descripti. Quoniam igitur a d & c e assumuntur
latera æqualia, erunt igitur reliquæ d i & i e æquales
circumferentiæ, & anguli i d h & i e k sunt enim ad ver-
ticem positi assumptorum æqualium, & qui circa h & k sunt
recti, & quæ vni sunt eædem rationes inter se sunt eædem,
erit par ratio subtensæ dupli i d, ad subtensam dupli i k,
cum sit vtraᴄⱫ per tertiũ præcedens, sicut dimetientis sphæ-
ræ ad subtendentem duplum angulum i d h, siue æqualem
dupli, qui sub i e k. Et per xiiij. quinti Elementorum Eu-
clidis, cũ sit subtendens duplam d i circumferentiam, æqua
lis ei, quæ duplam i e subtendit, erunt quoque duplicibus
subtensæ i k & h i æquales, & quemadmodum in circulis
æqualibꝰ æquales rectę lineę circũferentias auferunt æquales,
& partes eodem modo multiplicium in eadem sunt ratio-
ne, erunt ipsæ simplices i h & i k circumferentiæ æquales,
ac reliquæ quadrantium g h & k l, quibus constant angu
li b & f æquales. Quapropter eadem quoᴄⱫ ratio est sub-
tensæ duplicis a d ad subtensam duplicis b d, atᴄⱫ sub-
tensæ dupli c e ad subtensam dupli b d, quæ subtensæ
duplicis c e ad subtensam duplicis e f.   VtraᴄⱫ
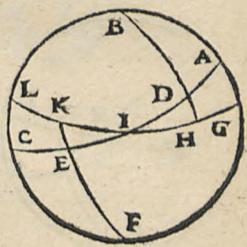
Vtraque enim est,ut subtendentis duplam h g siue equa-
lem ipsi k l ad subtensam duplicis b d h, hoc est dimetien
tis per iij. Theorema conuersim, & a d est æqualis ipsi c e.
Ergo per xiiij. quinti elementorum Euclidis b d æqualis est
ipsi e f per subtensas ipsis duplicibus rectas lineas.
Eodem modo per b d & e f æquales, demonstrabimus
reliqua latera & angulos æquales. Ac uicissim si a b & c f
assumantur æqualia latera, eandem sequentur rationis
identitatem.

VII.

Iam quoque si non fuerit angulus rectus, dummodo
latus quod æqualibus adiacet angulis alterum alteri æqua
le fuerit, itidem demonstrabitur. Quemadmodum si bino
rum triangulorum a b d & c e f, duo anguli b & d utcunꝗ
fuerint æquales duobus angulis e & f, alter alteri, latus
quoꝗ b d, quod adiacet æqualibus angulis, lateri e f æqua
le. Dico rursus æquilatera & æquiangula esse ipsa triangu
la. Susceptis enim denuo polis in b & f, describantur ma
ximorum circulorum circumferentiæ g h & k l. Et produ
ctæ a d & g h se secent in n, atque e c & l k similiter
productę in m. Quoniam igitur bina triangula h d n
& e k m angulos h d n & k e m habent æquales, qui sunt
ad uerticem assumptis æqualibus, & qui circa h & k sunt
recti per polos sectione, latera etiam d h & e k æqualia.
AEquiangula sunt ergo ipsa triangula & æquilatera per
præcedentem demonstrationem. Ac rursus quia g h &
k l sunt æquales circumferentiæ propter angulos b & f
positos æquales. Tota ergo g h n toti m k l æqualis per
axioma additionis æqualium. Sunt igitur & hic bina trian
gula a g n & m c l habentia unum latus g n ęquale uni
m l, angulum quoque a n g æqualem c m l, atque g & l
rectos. Erunt ob id ipsa quoque triangula æqualium la
terum & angulorum. Cum igitur æqualia ab æquali-
bus sublata fuerint, relinquentur æqualia a d ipsi c e, a b
ipsi c f, atque b a d angulus reliquo e c f angulo. Quod
erat demonstrandum.

Adhuc
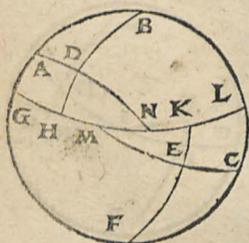
VIII.

Adhuc autem fi bina triangula, duo latera duobus la
teribus æqualia habuerint, alterum alteri, & angulum an=
gulo æqualem, fiue quem latera æqualia comprehendunt,
fiue qui ad bafim fuerit, bafim quoque bafi, ac reliquos an-
gulos reliquis habebunt æquales. Vt in præcedenti figura,
fit latus a b æquale lateri c f, & a d ipfi c e. Ac primum
angulus a, equalibus cõprehenfus lateribus angulo c. Di=
co bafim quoq b d, bafi e f, & angulum b ipfi f, & reli=
quum b d a reliquo; c e f effe æqualia. Habebimus enim bi
nà triangula a g n & c l m, quorum anguli g & l funt re
ctī, atq g a n equalem ipfi m c l, q reliqui funt equalium,
b a d & e c f. AEquiangula igitur funt inuicem & æqui-
latera ipfa triangula. Quapropter ex æqualibus a d & c e
relinquuntur etiam d n & m e æqualia. Sed iam patuit
angulum qui fub d n h æqualem effe ei qui fub e m k, &
qui circa h k funt recti, erunt quoq bina triangula d h n
& e m k æqualium inuicem angulorum & laterum, é qui
bus etiam b d relinquetur æquale ipfi e f, & g h ipfi k l,
quibus funt b & f anguli æquales, ac reliqui a d b & f e c
æquales. Quod fi pro lateribus a d & e c affumantur bafes
b d & e f æquales, æqualibus angulis obiecti, refidentibus
ceteris eodem modo demonftrabuntur, quoniam per angu
los g a n & m c l equales exteriores, & g c rectos, atq a g
ipfi c l, habebimus itidem bina triangula a g n & m c l,
quæ prius equalium inuicem angulorum & laterum. Illa
quoq particularia d n h & m e k fimiliter propter h &
k angulos rectos, & d n h, k m e æquales, atq d h & e k
latera æqualia, que reliqua funt quadrantium, é quibus ea-
dem fequuntur, quæ diximus.

IX.
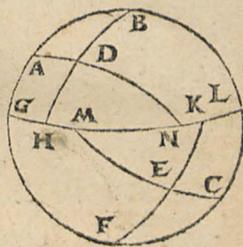
Ifofcelium in Sphæra triangulorum, qui ad bafim
anguli, funt fibi inuicem æquales. Efto triangulum a b c,
cuius duo latera a b & a c fint æqualia. Ab a vertice
defcendat maximus orbis, qui fecet bafim ad angulos re-
ctos, hoc eft, per polos, fitq a d. Cum igitur binorum tri-
angulorum a b d & a d c latus b a eft æquale lateri a c,

C   &   B
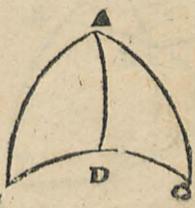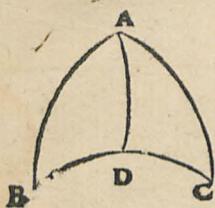
& a d vtrîq̃ cõmune & anguli, qui circa d recti, patet per præcedentem demonſtrationem, q̃ anguli qui ſub a b c & a c b ſunt æquales, quod erat demonſtrandum . Po_ riſma, hinc ſequitur, q̃ quæ per verticem trianguli Iſoſce_ lis circumferentia ad angulos rectos cadit in baſim , baſim ſimul & angulum æqualibus comprehenſum lateribus, bi_ fariam ſecabit, & è conuerſo, quod conſtat per hanc præce_ dentem demonſtrationem .

X .

Bina quælibet triangula in eadem Sphæra æqualía latera habentia alterum alteri, æquales etiam angulos ha_ bebunt alterum alteri ſigillatim . Quoniam enim trina vtrobique maximorum circulorum ſegmenta, pyramides cõſtituunt faſtigia habentes in centro ſphæræ, baſes autem triangula, quæ ſub rectis lineis circumferentias trangulo_ rum connexorum ſubtendentibus plana continentur , ſunt‹q̃ illæ pyramides ſimiles & æquales, per definitionem æqualium ſimilium ſolidarum figurarum . Ratio autem ſimilitudinis eſt, ut angulos quocunq̃ modo ſuſceptos, ha_ beant adinuicem ẽqualem alterum alterius, habebunt ergo angulos ipſa triangula æquales inuicem, & præſertim, quî generalius definiunt ſimilitudinem figurarum, eas eſſe uo_ lunt, quæcumq̃ ſimiles habent declinationes, ac in eiſdem angulos ſibi inuicem æquales. E quibus manifeſtum eſſe pu to, quod in ſphæra triangula, quæ inuicem ẽquilatera ſunt, ſimilia eſſe, ut in planis .

XI .

Omne triangulum, cuius duo latera fuerint data cum aliquo angulo, datorum efficitur angulorum & laté_ rum . Nam ſi latera data fuerint æqualia, erunt qui ad ba_ ſim anguli æquales, & deducta à vertice ad baſim circumfe_ rentia ad angulos rectos, facile patebunt quæſita per po_ riſma nonæ . Sin autem fuerint data latera inæqualia , ut in triangulo a b c, cuius angulus a ſit datus, cum binis la_ teribus, quæ uel comprehendunt datum angulum, uel non

com_

comprehendunt. Sint ergo primum comprehendentes
ipsum a b & a c data latera, & facto in c polo deſcriba-
tur circumferentia maximi circuli d e f , & compleantur
quadrantes c a d & c b e, atᵹ a b productum ſecet d e
in f ſigno . Ita quoᵹ in triangulo a d f datur a d latus
reliquum quadrantis ex a c. Angulus etiam b a d ex c a b
ad duos rectos . Nam eadem eſt ratio angulorum atᵹ di-
menſio, qui rectarum linearum ac planorum ſectione con
tingunt, & d angulus eſt rectus. Igitur per quartam huius
erit ipſum triangulum a d f datorum angulorum & late-
rum . Ac rurſus trianguli b e f inuentus eſt angulus f, &
e rectus per polum ſectione, latus quoᵹ b f, quo tota a b f
excedit a b. Erit ergo per idem Theorema & b e f trian-
gulum datorum angulorum & laterum. Vnde ex b e da-
tur b c reliquum quadrantis & latus quæſitum , & ex
e f reliquum totius d e f, quod d e, & eſt angulus c, atᵹ
per angulum qui ſub e b f, is qui ad verticem a b c quæ-
ſitus . Quod ſi loco a b aſſumatur c b, quod dato oppo
nitur angulo, idem eueniet. Dantur enim reliqua qua-
drantium a d & b e, atᵹ eodem argumento duo trian-
gula a d f & b e f datorum angulorum & laterum, ut
prius, é quibus triangulum a b c propoſitum datorum fit
laterum & angulorum, quod intendebatur.
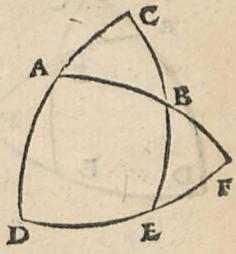
<div style="text-align:center">XII.</div>

Adhuc autem ſi duo anguli vtcunque dati fuerint
cum aliquo latere, eadem euenient. Manente enim præ-
ſtructione figuræ prioris, ſint trianguli a b c, duo anguli
a c b & b a c dati cum latere a c, quod vtrique adiacet
angulo. Porro ſi alter angulorum datorum rectus fuiſ-
ſet, poterant cætera omnia per quartum præcedens ratioci
nando conſequi. Hoc autem differre uolumus, quo mi
nus ſint recti. Erit igitur a d reliqua quadrantis ex
a c d, & qui ſub b a d angulus reſiduus ipſius b a c,
é duobus rectis, atque d rectus. Igitur trianguli a f d
per quartam huius dantur anguli cum lateribus.
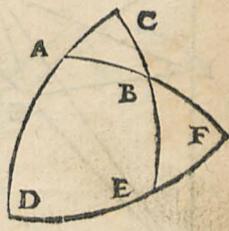
<div style="text-align:right">C ij   Ac</div>
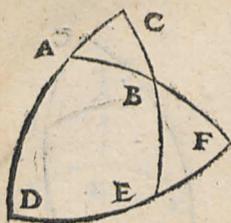
Ac per c angulum datum, datur d e circumferentia, & reliqua e f atᵍᵇ b e f rectus, & f angulus communis vtriᵍᵇ triangulo. Danturitidem per quartam huius b e & b f, quibus cætera constabunt latera a b & b c quæsita. Cæterum si alter angulorum datorum lateri dato oppositus fuerit, utputa, si a b c angulus detur, loco eius ꝗ sub a c b remanentibus cæteris, constabit eadem demonstratione totum a d f triangulum datis angulis & lateribus, ac particulare b e f triangulum similiter, quoniam propter angulum f vtriᵍᵇ communem, & e b f qui ad verticem est dato, & e rectum cuncta etiam latera eius dari in præcedentibus demonstratur, é quibus tandem sequuntur eadem quæ diximus. Sunt enim hæc omnia mutuo semper nexu colligata, atᵍᵇ perpetuo, vti formam Globi decet.

XIII.

Trianguli demum datis omnibus lateribus dantur anguli. Sint trianguli a b c omnia latera data, aio omnes quoᵍᵇ angulos inueniri. Aut enim triangulum ipsum latera habebit æqualia, vel minime. Sint ergo primum æqualia a b, a c. Manifestum est, quod etiam semisses subtendentium dupla ipsorum æquales erunt. Sint ipsæ b e, c e, quæ se inuicem secabunt in e signo, propter æqualem earum distantiam à centro sphæræ in sectione circulorum communi d e, quod patet per iiij. definitionem tertij Euclidis, & eius conuersionem. Sed per iij. eiusdem libri propositionem d e b angulus rectus est in a b d plano, & d e c similiter in plano a c d. Igitur angulus b e c est angulus inclinatio nis ipsorum planorum per iiij. definitionem vndecimi Euclidis, quem hoc modo inueniemus. Cum.n.subtensa fuerit recta linea b c, habebimus triangulum rectilineum b e c datorū laterum p datas illorū circumferentias, fiet etiam da torum angulorum, & angulum b e c habebimus quęsitū, hoc est, b a c sphęricū, & reliquos per præcedentia. Quod si scalenon fuerit triangulum, vt in secunda figura, manife stum est, quod rectarum sub ipsis duplis semisses linearum minime se tangent. Quoniam si a c circumferentia maior

<div align="right">fuerit</div>
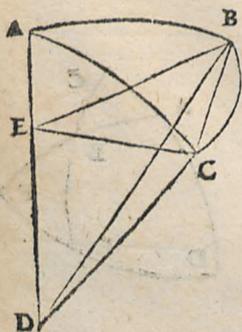
fuerit ipfi a b, fub ipfa ac duplicata femiſsis, quæ ſit c f, cadet
inferius. Sin minor fuperior erit, prout accidit tales lineas
propinquiores remotioresꝗ. fieri à centro per xv. tertij
Euclidis. Tunc autem ipſi b e parallelus agatur f g, quæ
ſecet ipſam b d communem circulorum ſectionem in g ſi-
gno, & conneᐰatur c g. Manifeſtum eſt igitur, quod e f g
angulus eſt reᐰus, nempe æqualis ipſi a e b, atꝗ e f c di-
midia ſubtenſa exiſtente c f dupli ipſius a c etiam reᐰus.
Erit igitur c f g angulus ſectionis ipſorum a b a c circulo
rum, quem idcirco etiam aſſequimur. Nam d f ad f g eſt,
ſicut d e ad e b, ſimiles enim ſunt d f g & d e b trianguli.
Ac in eadem ratione eſt etiam d g ad d b, dabitur etiam
ipſa d g in partibus quibus eſt d c Ꝫᴑᴑᴑᴑᴑᴑ. Quinetiam qui
ſub g d c angulus, datus eſt per b c circumferentiam. Er
go per ſecundam planorum datur g c latus in eiſdem par
tibus, quibus reliqua latera trianguli g f c plani, igitur per
vltimam planorum habebimus g f c angulum, hoc eſt,
b a c ſphæricum quæſitum, ac deinde reliquos per xi. ſphę
ricorum percipiemus.
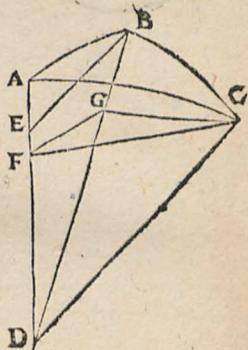
XIIII.

Si data circumferentia circuli ſecetur vtcumꝗ, ut vtrumꝗ
ſegmentoꝝ ſit minus ſemicirculo, & ratio dimidiæ ſubten-
dentis vnius ſegmenti, ad dimidium ſubtendentis duplum
alterius data fuerit, dabūtur etiam ipſorum ſegmentorum
circumferentiæ. Detur enim circumferentia a b c, circa d
centrum, quæ utcunꝗ ſecetur in b ſigno, ita tamen ut ſeg-
menta ſint ſemicirculo minora, fuerit autem ratio dimidiæ
ſub duplo a b ad dimidiam ſub duplo b c aliquo modo
in longitudine data, aio etiam a b & b c dari circumferen-
tias. Subtendatur enim a c recta, quam ſecet dimetiens in
e ſigno, à terminis autem a c perpendiculares cadant ad
ipſum dimetientē, quæ ſint a f, c g, quas oportet eſſe ſemiſ
ſes ſub duplis a b & b c. Triangulorū igitur a e f & c e g
rectangulorū anguli, qui ad e verticem ſunt equales, & ip-
ſi propterea trianguli æquianguli ac ſimiles, habent latera
proportionalia æquales angulos reſpicientia. Vt a f ad

C iij   e g
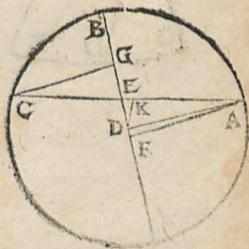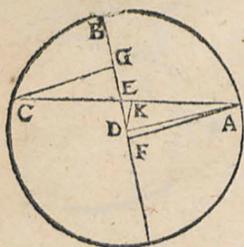
c g, ſic a e ad e c. Quibus igitur numeris a f vel g e data
fuerint, habebimus in ijſdem a e & e c, dabitur ex his tota
a e c in eiſdem. Sed ipſa ſubtendens a b c cicumferen-
tiam datur in partibus, quibus quę ex centro d e b, quibus
etiam ipſius a c dimidia a k, & reliqua e k. Coniungan-
tur d a & d k, quæ etiam dabuntur in eiſdem partibus,
quibus d b, tanquam ſemiſſis ſubtendentis reliquum ſeg-
mentum ipſius a b c à ſemicirculo, comprehenſum ſub
angulo d a k & angulus igitur a d k datur comprehen-
dens, dimidiam a b c circumferentiam. Sed & trianguli
duobus lateribus datis & angulo e k d recto, dabitur etiam
e d k, hinc totus ſub e d a angulus comprehendens a b
circumferentiam, qua etiam reliqua c b conſtabit, quorum
expetebatur demonſtratio.

XV.

Trianguli datis omnibus angulis, etiam nullo recto,
dantur omnia latera. Eſto triangulum a b c, cuius omnes
anguli ſint dati, nullus autem eorum rectus. Aio omnia
quoque latera eius dari. Ab aliquo enim angulorum ut a
deſcendat per polos ipſius b c circumferentia a d, quæ
ſecabit ipſum b c ad angulos rectos, ipſaq́ a d cadet in tri-
angulum, niſi alter angulorum b uel c ad baſim obtuſus
eſſet, & alter acutus, quod ſi accideret, ab ipſo obtuſo dedu
cendus eſſet ad baſim. Completis igitur quadrantibus
b a f, c a g, d a e, factisq́ polis in b c, deſcribantur circum
ferentiæ e f, e g. Erunt igitur & circa f g anguli recti.
Triangulorum igitur rectum angulum habentium erit
ratio dimidiæ quæ ſub duplo a e, ad dimidiam ſub duplo
e f, quæ dimidia diametri ſphæræ ad dimidiam ſubtenden-
tis duplum anguli e a f. Similiter in triangulo a e g
angulum rectum habente g, ſemiſſis quæ ſub duplo a e
ad ſemiſſem, quæ ſub duplo e g, eandem habebit ratioñe,
quam dimidia diametri ſphæræ ad dimidiam, quæ duplum
anguli e a g ſubtendit. Per æquam igitur rationem di
midia ſub duplo e f ad dimidiam ſub duplo e g ratio-

nem habebit, quam ſemiſſis ſub duplo angulo e a f ad ſe-
miſſem ſub duplo anguli e a g. Et quoniam & f e, e g cir
cumferentiæ datę ſunt, ſunt enim reſidua, quibus angu-
li a & b differunt à rectis. Habebimus ergo ex his ratio-
nem angulorum e a f & e a g, hoc eſt, b a d ad c a d, qui
illis ad verticem ſunt, datos. Totus autem b a c
datus eſt. Per præcedens igitur Theorema
etiam b a d & c a d anguli
dabuntur.
Deinde per quintum, latera
a b, b c, a c, c d, totumcp
b c aſſequemur.
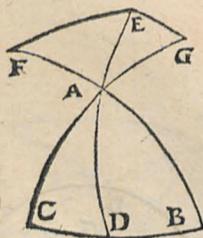
FINIS.
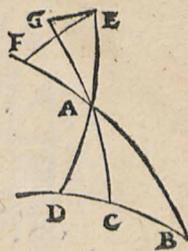
CANONSVBTEN
SARVM IN CIRCVLO RE-
ctarum linearum.

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2	5818		180341		354809		529170		703369		58
3	8727		183250		357716		532073		706270		57
4	11636		186155		360623		534980		709172		55
5	14544		189066		363530		537884		712073		55
6	17453		191975		366437		540789		714975		54
7	20362		194883		369344		543694		717876	2901	53
8	23271		197792		372251		546558		720777		52
9	26180		200700		375156		549503	2904	723673		51
10	29088		203608		378064		552407		726579		50
11	31997		205517		380971		555312		729480		49
12	34906		209425		383878		558216		732381		48
13	37815		212333		386785		561120		735282		47
14	40724		215241		389692		564024		738183		46
15	43632		218149		392598		566928		741084		45
16	46541		221057		395505		569832		743985		44
17	49450		223965		398412		572736		746886		43
18	52359		226873		401318		575940		749787		42
19	55268		229781		404225		578544		752688	2900	41
20	58177		232689		407131		581448		755588		40
21	61086		235597		410038		584352		758489		39
22	63995		238505		412944		57256		761389		38
23	66904		241413		415851		590160		764290		37
24	69813		244321		418757		593064		767180		36
25	72721		247229		421663		595967		770090		35
26	75630		250137		424570		598871		772991		34
27	78539		253045		427476		901775		775891		33
28	81448		255953		430382		604678		778791		32
29	84357		258861		433288		607582		781691		31
30	87265		261769		436194		610485		784591		30
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32	93083		267585		442006		616292	790391		28
33	95992		270493		444912		619196	793291		27
34	98901		273401		447818		622099	2903 796191		26
35	101809		276308		450724		625002	799090		25
36	104718		279216		453630		627905	801990		24
37	107627		282124		456536		630808	804889		23
38	110536		285032		459442		633711	807789		22
39	113445		287940		462348		636614	810688		21
40	116353		290847		465253		639517	813587		20
41	119262		293755		468159		642420	816486	2899	19
42	122171		296663		471065		645323	819385		18
43	125079		299570		473970		648226	822284		17
44	127988		302478		476876		651129	825183		16
45	130896		305385		479781		654031	828082		15
46	133805		308293		482687		656934	830981		14
47	136714		311200		485592		659837	833880		13
48	139622		314108		488498		662739	836778		12
49	142531		317015		491403		665642	839677		11
50	145439		319922		494308		668544	842575		10
51	148348		322830		497214		671447	845474		9
52	151257		325737		500119		674349	2902 848372		8
53	154165		328645		503024		677251	851271		7
54	157074		331552		505929		680153	854169	2898	6
55	159982		334459		508834		683055	857067		5
56	162891		337367		511740		685957	859965		4
57	165799		340274		514645	2905	688859	862863		3
58	168708		343181		517550		691761	865761		2
59	171616		346088		520455		694663	868659		1
60	174529		348995		523360		697565	871557		0
	89		88		87		86	85		

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	5		6		7		8		9		
1	874455		1048178		1221580	2887	1394612		1567211		59
2	877553		1051071		1224467		1397492		1570091		58
3	880250		1053964		1227354		1400373		1572964		57
4	883148		1056857		1230231		1403253		1575837		56
5	886045		1059749		1233128		1406133		1573709		55
6	888943		1062642	2892	1236015		1409013		1581581	2872	54
7	891840		1065534		1238901		1411893		1584453		53
8	894737		1068426		1241788		1414772		1587325		52
9	897634	2897	1071318		1244674	2886	1417652		1590197		51
10	900533		1074210		1247560		1420531	2879	1593069		50
11	903428		1077102		1250446		1423410		1595941		49
12	906325		1079994		1253332		1426289		1598812		48
13	909222		1082886		1256218		1429168		1601684	2871	47
14	912119		1085778		1259104		1432047		1604555		46
15	915016		1088669		1261990		1434926		1607426		45
16	917913		1091561		1264876		1437805		1610297		44
17	920809		1094452		1267791		1440684		1613168	2870	43
18	923706	2896	1097344	2891	1270647		1443562		1616038		42
19	926602		1100235		1273532	2885	1446441	2873	1618909		41
20	929498		1103126		1276417		1449319		1621779		40
21	932395		1106017		1279302		1452197		1624649		39
22	935291		1108908		1282187		1455075		1627519		38
23	938187		1111799		1285072		1457953		1630389		37
24	941083		1114690	2890	1287957		1460831		1633259		36
25	943979		1117580		1290841		1463708		1636129		35
26	946875		1118471		1293726		1466586	2877	1638999		34
27	949771		1123361		1296610	2884	1469463		1641868		33
28	952667		1126252		1299494		1472340		1644738		32
29	955563		1129142		1302378		1475217		1647607		31
30	958458		1132032		1305262		1478094		1650476	2369	30
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14

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31	961354	2895	1134922		1308146		1480971		1653345		
32	964249		1137912		1311030		1483843		1656214	2868	29
33	967144		1140702		1313914		1486724		1659082		28
34	970039		1143592		1316793		1489601	2876	1661951		27
35	972934		1146482		1319681	2883	1492477		1664819		26
36	975825		1149372		1322564		1495353		1667687		25
37	978724		1152261		1325447		1498229		1670555		24
38	981619		1155151		1328330		1501105		1673423		23
39	984514		1158040		1331213		1503981		1676291		22
40	987408		1160929	2889	1334096		1506857		1679159		21
41	990303		1163818		1336979		1509733		1682027	2867	20
42	993198		1166707		1339862		1512608		1684894		19
43	996092		1169596		1342744		1515484	2875	1687761		18
44	998987	2894	1172485		1345627		1518359		1690628		17
45	1001881		1175374		1348509		1521234		1693495		16
46	1004775		1178263		1351392	2882	1524109		1696362		15
47	1007669		1181151		1354274		1526984		1699229		14
48	1010563		1184040		1357156		1529856		1702095		13
49	1013457		1186928	2888	1360038		1532734	2874	1704962		12
50	1016351		1189816		1362920		1535608		1707828	2866	11
51	1019245		1192704		1365802	2881	1538482		1710694		10
52	1022139		1195592		1368683		1541356		1713560		9
53	1025033		1198480		1371564		1544230		1716426		8
54	1027926		1201368		1374446		1547104		1719292		7
55	1030819		1204255		1377327		1549978		1722157		6
56	1033713	2893	1207143		1380208		1552852		1725022	2865	5
57	1036606		1210031		1383089		1555725		1727887		4
58	1039499		1212918		1385970		1558599	2873	1730752		3
59	1042392		1215806		1388851	2880	1561472		1733617		2
60	1045285		1218693		1391733		1564345		1736482		1
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3	1745075		1916655		2087652		2258013		2427685		57
4	1747935		1919510		2090497	2844	2260847	2833	2430507	2821	56
5	1750803		1922365		2093342		2263680		2433329		55
6	1753667		1925220	2854	2096135		2266512		2436150		54
7	1756531	2863	1928074		2099030		2269346		2438971		53
8	1759394		2930928		2101874		2272179		2441792		52
9	1762258		1933782		2104719		2275012	2832	2444613		51
10	1765121		1936636		2107562	2843	2277844		2447434	2820	50
11	1767984		1939490	2853	2110405		2280676		2450254		49
12	1770347		1942344		2113248		2283508		2453074		48
13	1773710		1945197		2116091		2286340		2455894		47
14	1776573		1948050		2118934		2289163	2831	2458714		46
15	1779437		1950903		2121777		2292004		2461533	2819	45
16	1782298	2862	1953756		2124620		2294835		2464352		44
17	1785160		1956609		2127462	2842	2297666		2467171		43
18	1788022		1959462	2852	2130304		2300497		2469990		42
19	1790884		1962314		2133146		2303328		2472809		41
20	1793746		1965166		2135988		2306159	2830	2475628	2818	40
21	1796608		1968018		2138830	2841	2308989		2478445		39
22	1799469		1970870		2141671		2311819		2481264		38
23	1802331	2861	1973722		2144512		2314649		2484082		37
24	1805192		1976574	2851	2147353		2317479		2486900	2817	36
25	1808053	2850	1979425		2150194		2320309		2489717		35
26	1810914		1982276		2153035		2323138	2829	2492534		34
27	1813774		1985127		2155876	2640	2325967		2495351		33
28	1816634		1987979		2158716		2328799		2498168		32
29	1819495		1990829	2850	2161556		2331625		2500984	2816	31
30	1822355		1993679		2164396		2334454	2928	2503800		30
	79		**78**		**77**		**76**		**75**		

	10		11		12		13		14		
31	1825215		1996530		2167236		2337282		2506616		29
32	1828075		1959380		2170076		2340110		2509432		28
33	1830935		2002230		2172916	2839	2342938		2512248		27
34	1833795		2005080		2175755		2345766		2515064		26
35	1836684	2359	2007930		2178594		2348594	2827	2517879	2815	25
36	1839513		2010780		2181433		2351421		2520694		24
37	1842372		2013629	2849	2184272		2354248		2523509		23
38	1845231		2016478		2187111	2938	2357075		2526324		22
39	1848090		2019327		2189949		2359902		2529138	2814	21
40	1850949		2022176		2192787		2362729		2531952		20
41	1853809	2358	2025025		2195625		2365555	2826	2534766		19
42	1856666		2027874		2198463	2837	2368381		2537580		18
43	1859524		2030722	2848	2201300		2371207		2540393		17
44	1862382		2033570		2204137		2374033		2543206	2813	16
45	1865240		2036418		2206974		2376855	2825	2546019		15
46	1868098		2039266		2209811		2379684		2548832		14
47	1870956	2357	2042114		2212648		2382589		2551645		13
48	1873811		2044962	2347	2215485		2385334		2554458	2812	12
49	1876670		2047809		2218322	2836	2388159		2557270		11
50	1879527		2050656		2221158		2390983		2560082		10
51	1882384		2053503		2223994		2393808	2824	2562994		9
52	1885241		2056350		2226830		2396632		2565706		8
53	1888098	2356	2059197	2846	2229666		2399456		2568517	2811	7
54	1890954		2062043		2232502	2835	2402285		2571328		6
55	1893810		2064889		2235337		2405104		2574139		5
56	1896666		2077735		2238173		2407927		2576950	2810	4
57	1899522		2070581		2241007		2410750	2823	2579760		3
58	1902373		2073427		2243842		2413573		2582570		2
59	1905234		2076272	2845	2246677		2416396	2834	2585380		1
60	1908090		2079117		2249511		2419219		2588190		0
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1	2591000	2909	2759165		2926499	1	3092936		3258432		59
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3	2596618		2764761	5	2932061		3098468		3263931		57
4	2599427		2767556		2934842		3101234	5	3266681		56
5	2602236		2770351		2937623	2780	3103999		3269430		55
6	2605045	8	2773146		2940403		3106764		3272179	2749	54
7	2607853		2775941	4	2943183		3109529		3274927		53
8	2610661		2778735		2945963		3112294		3277675		52
9	2613469		2781529		2948743		3115058		3280423	8	51
10	2616277	7	2784323		2951523		3117822		3283171		50
11	2619084		2787117	3	2954302	2779	3120586		3285918	7	49
12	2621891		2789911		2957081		3123349		3288665		48
13	2624698		2792704		2959860		3126111		3291412		47
14	2627505		2795497		2962638		3128875		3294159		46
15	2630312	6	2798290		2965416	8	3131638		3296906	6	45
16	2633118		2801082	2	2968194		3134400		3299652		44
17	2635924		2803874		2970972		3137162		3302398		43
18	2638730		2806666		2973750	7	3139924		3305144	5	42
19	2641536		2809458		2976527	6	3142686		3307889		41
20	2644342	5	2812250		2979305		3145448		3310634		40
21	2647147		2815041	1	2982081		3148209		3313379	4	39
22	2649952		2817832		2984857		3150970		3316123		38
23	2652757		2820623		2987633	2860	3153731		3318867		37
24	2655561	4	2823414	2790	2990409		3156491		3321611		36
25	2658366		2826204		2993185	5	3159251		3324355	3	35
26	2661170		2828994		2995960		3162011	2759	3327098		34
27	2663974	3	2831784		2998735		3164770		3329841		33
28	2666777		2834574		3001510	4	3167529		3332585	2	32
29	2669580		2837364	2789	3004284		3170238		3335327		31
30	2672383		2840153		3007058	8	3173047		3338069		30

74	73	72	71	70

IN CIRCVLO RECTARVM LINEARVM.

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31	2675186		2842942	3009932	3175805		3340811		29
32	2677989		2845731	3012606	3178567		3343553	1	28
33	2680792		2848520	3015380	3181321		3346294		27
34	2683595		2851308	3018153	3184079		3349035		26
35	2686397		2854096	3020926	3186837		3351776	2740	25
36	2689199		2856884	3023699	3189594		3354516		24
37	2692001	1	2859672	3026472	3192351		3357256		23
38	2694802		2862459	3029244	3195108		3359996		22
39	2697603		2865246	3032016	3197864		3362736	2739	21
40	2700404		2868033	3034788	3200620		3365475		20
41	2703205	2800	2870819	3037559	3203375		3368214		19
42	2706005		2873905	3040330	3206130		3370953		18
43	2708805		2876391	3043101	3208885		3373691		17
44	2711605	2799	2879177	3045872	3211640		3376429		16
45	2714405		2881963	3048643	3214395	2770	3379167		15
46	2717204		2884748	3051419	3217150		3381905		14
47	2720003		2887533	3054183	3219904		3384642		13
48	2722802		2890319	3056953	3222658		3387379		12
49	2725601	8	2893103	3059723	3225412	2769	3390116		11
50	2728400		2895288	3062492	3228165		3392852		10
51	2731198		2898672	3065261	3230918		3395588		9
52	2733996		2901456	3068030	3233671		3398324		8
53	2736794	7	2904240	3070798	3236423		3401060		7
54	2739592		2907023	3073566	3239175		3403795		6
55	2742389		2909806	3076334	3241927		3406530		5
56	2745186		2912589	3079102	3244679		3409265		4
57	2747983		2915371	3081869	3247430		3411999		3
58	2750780		2918153	3084636	3250181	2750	3414733		2
59	2753577		2920935	3087403	3252932		3417467		1
60	2756373		2923717	3090170	3255682		3420201		0
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2	3425667		3589110		3751460	6	3912666	7	4072680		58
3	3428400		3591825		3754156		3915343		4075337	6	57
4	3431133		3594540	4	3756852		3918020		4077993		56
5	3433865	2	3597254		3759548		3920696	6	4080649		55
6	3436597		3599968		3762243	5	3923372		4083305	5	54
7	3439329	1	3602682		3764938		3926048	5	4085960		53
8	3442060		3605395		3767633	4	3928723		4088615		52
9	3444791		3608108		3770327		3931398	4	4091269	4	51
10	3447522		3610821	2	3773021		3934072		4093923		50
11	3450253	2730	3613533		3775715	3	3936746		4096577		49
12	3452983		3616245		3778409		3939420	3	4099231	3	48
13	3455713		3618957		3781101		3942093		4101884		47
14	3458442	2729	3621669	1	3783794	2	3944766		4104537	2	46
15	3461171		3624380		3786486		3947439		4107189		45
16	3463900		3627091		3789178		3950112	2	4109841		44
17	3466629	8	3629802	2710	3791870		3952784		4112493	1	43
18	3469357		3632512		3794562	1	3955456		4115144		42
19	3472085		3635222		3797253		3958128	1	4117795		41
20	3474813	7	3637932		3799944		3960799		4120446	2650	40
21	3477540		3640642	2709	3802635	2690	3963470	2680	4123096		39
22	3480267		3643351		3805345		3966140		4125746		38
23	3482994		3646060		3808015	2689	3968810		4128395		37
24	3485724		3648768	8	3810704		3971480		4131044		36
25	3488447		3651476	6	3813393		3974149	2669	4133693	2649	35
26	3491173		3654184		3816082		3976818		4136341		34
27	3493899		3656892	5	3818771	8	3979487	8	4138989		33
28	3496624		3659599		3821459		3982155		4141637	8	32
29	3499349		3662306	6	3824147	7	3984823		4144284		31
30	3502075		3665012	4	3826834		3987491		4146932	7	30
	69		**68**		**67**		**66**		**65**		

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	20	21	22	23		24		
31	3504799	3667718	3829521	3990159	7	4149579		29
32	3507523	3670424	3832208	3992826		4152226		28
33	3510247	3673130	5 3834895	6 3995493		4154872	6	27
34	3512971	3 3675835	3837581	3998157	6	4157518	5	26
35	3515694	3678541	3840267	4000825		4160163		25
36	3518417	3681246	3842953	5 4003491		4162808		24
37	3521140	2 3683951	4 3845635	4006156		4165453	4	23
38	3523862	3686655	3848323	4008821		4168097		22
39	3526584	3689359	3 3851008	4 4011486	4	4170741		21
40	3529306	1 3692062	3853692	4014150		4173385	3	20
41	3532027	3694765	3856376	4016814		4176028		19
42	3534748	3697468	2 3859060	3 4019478	3	4178671		18
43	3537469	3700170	3861743	4022141		4181413		17
44	3540190	2720 3702872	3864426	4024804		4183955	2	16
45	3542910	3705574	3867109	2 4027467		4186597		15
46	3545630	3708276	1 3869791	4030130		4189239	1	14
47	3548350	3710977	3872473	4032792	2	4191880		13
48	3551070	3713678	3875155	4035454	1	4194521		12
49	3553789	2719 3716379	3877837	1 4038115		4197162	2640	11
50	3556508	3719080	2700 3880518	4040776		4199802		10
51	3559227	8 3721780	3883199	4043437	2660	4202442		9
52	3561945	3724480	3885880	4046097		4205081	2639	8
53	3564663	7 3727179	2699 3888560	2680 4048757	2659	4207720		7
54	3567380	3729878	3891240	2679 4051416		4210359	8	6
55	3570097	3732577	3893919	4054075		4212997		5
56	3572814	3735275	8 3896598	4056734		4215635		4
57	3575531	6 3737973	3899277	8 4059392		4218273	7	3
58	3578247	3740671	3901955	4062050		4220910		2
59	3580963	3743369	7 3904633	4064708		4223547	6	1
60	3583679	3746066	3907311	4067366		4226183		0
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	25		26		27		28		29		
1	4228819	2636	4386326	2614	4542497	2591	4697234	2568	4850640	2544	59
2	4231455	5	4388940	4	4545088	1	4699852	8	4853184	3	58
3	4234090	5	4391554	4	4547679	1	4702419	7	4855727	3	57
4	4236725	5	4394167	3	4550270	2590	4704986	7	4858270	2	56
5	4239360	5	4397730	3	4552860	0	4707553	7	4860812	2	55
6	4241994	4	4399392	2	4555450	0	4710119	6	4863354	1	54
7	4244628	4	4402004	2	4558039	2589	4712685	6	4865395	1	53
8	4245272	4	4404616	2	4560628	9	4715250	5	4868436	1	52
9	4249895	3	4407227	1	4563216	8	4717815	5	4870977	2540	51
10	4252528	3	4409838	1	4565804	8	4720380	5	4873517	0	50
11	4255161	2	4412449	1	4568392	8	4722944	4	4876057	2539	49
12	4257793	2	4415059	2610	4570979	7	4725508	4	4878596	9	48
13	4260425	8	4417669	0	4573566	7	4728071	3	4881135	9	47
14	4263056	7	4420278	2609	4576153	7	4730634	3	4883674	8	46
15	4265687	7	4422387	9	4578739	6	4733197	3	4886212	8	45
16	4268318	1	4425496	9	4581325	6	4735759	2	4888750	7	44
17	4270949	2630	4428104	8	4583911	6	4738321	2	4891287	7	43
18	4273579	0	4430712	8	4586496	5	4740882	1	4893824	7	42
19	4276209	2629	4433320	8	4589081	5	4743443	1	4896361	6	41
20	4278838	9	4435927	7	4591665	4	4746004	2560	4898897	6	40
21	4281467	9	4438534	7	4594249	4	4748564	0	4901433	6	39
22	4274096	9	4441140	6	4596833	4	4751124	2559	4903968	5	38
23	4286724	8	4443746	6	4599416	3	4753683	9	4906503	4	37
24	4289352	8	4446352	6	4601999	3	4756242	9	4909037	4	36
25	4291979	7	4448957	5	4604581	2	4758801	8	4911571	4	35
26	4294606	7	4451562	5	4607163	2	4761359	8	4914105	3	34
27	4297233	7	4454167	5	4609744	1	4763917	7	4916638	3	33
28	4299859	6	4456771	4	4612325	1	4766474	7	4919171	2	32
39	4302485	6	4459375	4	4614906	1	4769031	7	4921703	2	31
30	4305111	6	4461978	3	4617486	2580	4771588	6	4924235	2	30

| 64 | 63 | 62 | 61 | 60 | |

	35		36		37		38		39		
31	4307736		4464581	3	4620066	0	4774144	6	4926767	1	29
32	4310361	5	4457184	3	4622646	0	4776700	5	4929298	1	28
33	4312996	5	4469786	2	4625225	2579	4779255	3	4931829	2530	27
34	4315610	4	4472388	2	4627804	8	4781810	5	4934359	0	26
35	4318234	4	4474990	2	4630382	8	4784365	4	4936889	2529	25
36	4320958	4	4477591	8	4632960	8	4786919	4	4939418	9	24
37	4323481	3	4480192	1	4635538	7	4789473	3	4941947	9	23
38	4326104	3	4482792	2600	4638115	7	4792026	3	4944476	8	22
39	4328726	2	4485392	0	4640692	6	4794579	3	4947004	8	21
40	4331348	2	4487992	0	4643268	6	4797132	2	4949532	7	20
41	4333970	2	4490591	2599	4645844	6	4799684	2	4952059	7	19
42	4336591	1	4493190	9	4648420	5	4802236	1	4954586	7	18
43	4339212	1	4495788	8	4650995	5	4804787	1	4957113	6	17
44	4341833	1	4498386	8	4653570	5	4807338	2550	4959639	6	16
45	4344453	2620	4500984	8	4656145	4	4809888	0	4962165	5	15
46	4347073	0	4503582	8	4658719	4	4812438	0	4964690	5	14
47	4349693	0	4506179	7	4661293	3	4814988	2549	4967215	5	13
48	4352312	2619	4508776	7	4663866	3	4817537	9	4969740	4	12
49	4354931	9	4511372	6	4666439	3	4820086	9	4972264	4	11
50	4357549	8	4513968	6	4669012	2	4822635	8	4974788	3	10
51	4360167	8	4516563	5	4671584	2	4825183	8	4977311	3	9
52	4362785	8	4519158	5	4674156	1	4827731	7	4979834	2	8
53	4365402	7	4521753	5	4676727	1	4830278	7	4982356	2	7
54	4368019	7	4524347	4	4679298	1	4832825	6	4984878	1	6
55	4370635	6	4526941	4	4681869	2570	4835371	6	4987399	1	5
56	4373251	6	4529535	4	4684439	0	4837917	5	4989920	1	4
57	4375867	6	4532128	3	4687009	0	4840462	5	4992441	2520	3
58	4378482	5	4534721	3	4689578	2569	4843007	5	4994961	0	2
59	4381097	5	4537313	2	4692147	9	4845552	4	4997481	2519	1
60	4383712	5	4539905	2	4694716	9	4848096	4	5000000	9	0
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	30		31		32		33		34		
1	5002519	2519	5152874	2493	5301659	2466	5448829	2439	5594340	2411	59
2	5005038	8	5155367	2	5304125	6	5451263	9	5596751	2410	58
3	5007556	8	5157859	2	5306591	5	5453707	8	5599161	0	57
4	5010074	7	5160351	2	5309056	5	5456145	8	5601571	0	56
5	5012591	7	5162843	1	5311521	4	5458583	7	5603981	2409	55
6	5015108	6	5165334	1	5313985	4	5461020	6	5606390	8	54
7	5017624	6	5167825	2490	5316449	4	5463456	6	5608798	8	53
8	5020190	6	5170315	0	5318913	3	5465802	6	5611206	8	52
9	5022650	5	5172805	2489	5321376	3	5468328	5	5613614	7	51
10	5025171	5	5175294	9	5323839	2	5470763	5	5616021	6	50
11	5027686	4	5177783	8	5326301	2	5473198	4	5618427	6	49
12	5030200	4	5180271	8	5328763	1	5475632	4	5620833	6	48
13	5032714	3	5182759	7	5331224	1	5478066	3	5623239	5	47
14	5035227	3	5185246	7	5333685	2460	5480499	3	5625644	5	46
15	5037740	3	5187733	7	5336145	0	5482932	2	5628049	4	45
16	5040253	2	5190220	6	5338605	0	5485364	2	5630453	4	44
17	5042765	2	5192706	6	5341065	2459	5487796	2	5632857	3	43
18	5045277	1	5195192	5	5343524	9	5490228	1	5635260	3	42
19	5047788	1	5197667	5	5345983	8	5492659	1	5637663	3	41
20	5050299	2510	5200162	4	5348441	8	5495090	2430	5640066	2	40
21	5052809	0	5202646	4	5350898	7	5497520	0	5642468	1	39
22	5055319	0	5205130	4	5353355	7	5499950	2429	5644869	1	38
23	5057829	2509	5207614	3	5355812	6	5502379	9	5647270	24.00	37
24	5060338	9	5210097	3	5358268	6	5504808	8	5649670	0	36
25	5062847	8	5212580	2	5360724	5	5507236	8	5652070	2399	35
26	5065355	8	5215062	2	5363179	5	5509664	7	5654469	9	34
27	5067863	7	5217544	1	5365634	4	5512091	7	5656868	8	33
28	5070370	7	5220025	1	5368088	4	5514518	6	5659266	8	32
29	5072877	7	5222506	2480	5370542	4	5516944	6	5661664	8	31
30	5075384	6	5224986	0	5372996	3	5519370	5	5664062	7	30

| | 59 | | 58 | | 57 | | 56 | | 55 | | |

IN CIRCVLO RECTARVM LINEARVM.

	30		31		32'		33'		34		
31	5077890	6	5227466	0	5375449	3	5521795	5	5666459	7	29
32	5080396	5	5229946	2479	5377902	2	5524220	5	5668856	6	28
33	5082901	5	5232425	9	5380354	2	5526645	4	5671252	9	27
34	5085406	5	5234904	8	5382806	2	5529069	4	5673648	5	26
35	5087911	4	5237382	8	5385258	1	5531491	3	5676043	5	25
36	5090415	4	5239860	7	5387709	1450	5533916	2	5678438	4	24
37	5092919	3	5242337	7	5390159	0	5536338	2	5680832	4	23
38	5095422	3	5244614	6	5392609	2449	5538760	2	5683226	3	22
39	5097925	2	5247290	6	5395058	9	5541182	1	5685619	3	21
40	5100427	2	5249766	5	5397507	8	5543603	1	5688012	2	20
41	5102929	1	5252241	5	5399855	8	5546024	2420	5690404	2	19
42	5105430	1	5254716	5	5402403	8	5548444	0	5692796	1	18
43	5107931	2500	5257191	4	5404851	7	5550864	2419	5695187	1	17
44	5110431	0	5259665	4	5407298	7	5553283	9	5697578	2390	16
45	5112931	0	5262139	3	5409745	6	5555702	8	5699968	0	15
46	5115431	2499	5264612	3	5412191	6	5558120	8	5702358	2389	14
47	5117930	9	5267085	2	5415637	5	5560538	8	5704747	9	13
48	5120429	8	5269557	2	5417082	5	5562956	7	5707136	8	12
49	5122927	8	5272029	2	5419527	5	5565373	7	5709524	8	11
50	5125425	7	5274501	1	5421972	4	5567790	6	5711912	7	10
51	5127922	7	5276972	1	5424416	3	5570206	6	5714269	7	9
52	5130419	7	5279443	2476	5426859	3	5572622	5	5716686	6	8
53	5132916	6	5281913	6	5429302	2	5575037	5	5719072	6	7
54	5135412	6	5284383	2469	5431745	2	5577452	4	5721458	6	6
55	5137908	5	5286852	9	5434187	2	5579866	4	5723844	5	5
56	5140403	5	5289321	9	5436629	1	5582280	3	5726229	4	4
57	5142898	5	5291789	8	5439070	2440	5594693	3	5728613	4	3
58	5145393	4	5294257	8	5441510	0	5597106	2	5730997	4	2
59	5147887	4	5296725	8	5443950	0	5589518	1	5733381	3	1
60	5150381	3	5299192	7	5446390	2439	5591929	1	5735764	3	0
	59		58		57		56		55		

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	35		36		37		38		59		
1	5738147	2382	5880205	2353	6020473	2323	6158907	2291	6295464	2260	59
2	5740529	2	5882558	2	6022796	2	6161198	1	6297724	2239	58
3	5742911	1	5884910	2	6025118	1	6163489	1	6299983	9	57
4	5745292	2380	5887262	1	6027439	1	6165780	2290	6302242	9	56
5	5747672	0	5889613	1	6029760	2320	6168070	2289	6304501	8	55
6	5750052	0	5891964	2350	6032080	0	6170259	9	6306759	8	54
7	5752432	2375	5894314	0	6034400	2319	6172648	8	6309016	7	53
8	5754811	9	5896664	2349	6036719	9	6174936	8	6311273	6	52
9	5757190	8	5899013	8	6039038	9	6177224	8	6313529	5	51
10	5759568	8	5991361	8	6041357	8	6179512	7	6315784	5	50
11	5761946	7	5903709	7	6043675	7	6181799	6	6318035	4	49
12	5764323	7	5906056	7	6045992	7	6184085	6	6320293	4	48
13	5766700	6	5908403	7	6048309	6	6186371	5	6322547	3	47
14	5769076	6	5910750	9	6050625	5	6188656	4	6324800	3	46
15	5771452	5	5913096	6	6052940	5	6190940	4	6327053	2	45
16	5773827	5	5915442	5	6055255	5	6193224	4	6329305	2	44
17	5776202	4	5917787	5	6057570	4	6195508	3	6331557	1	43
18	5778576	4	5920132	4	6059884	4	6197791	3	6333808	1	42
19	5780950	4	5922476	4	6062198	3	6200074	2	6336059	1	41
20	5783324	3	5924820	3	6064511	3	6202356	2	6338310	2250	40
21	5785697	2	5927163	2	6066824	2	6204638	1	6340560	2249	39
22	5788069	2	5929505	2	6069136	2	6206919	2280	6342809	9	38
23	5790441	1	5931847	2	6071448	2	6209199	0	6345058	8	37
24	5792812	1	5934189	1	6073759	2310	6211479	2279	6347306	7	36
25	5795183	2379	5936530	1	6076069	0	6213753	9	6349553	7	35
26	5797553	0	5938871	2340	6078379	2309	6216037	8	6351800	6	34
27	5799923	2369	5941211	0	6080638	9	6218315	8	6354046	6	33
28	5802292	9	5943551	2339	6082997	9	6220593	7	6356292	5	32
29	5804661	9	5945890	8	6085306	8	6222870	6	6358537	5	31
30	5807030	8	5948228	8	6087614	8	6225146	6	6360782	4	30
	54		53		52		51		50		

IN CIRCVLO RECTARVM LINEARVM

	35		36		37		38		39		
31	5809398	8	5950566	8	6089922	7	6227422	6	6363026	4	29
32	5811766	7	5952904	7	6092229	7	6229698	5	6365270	3	28
33	5814133	6	5955241	7	6094536	6	6231973	5	6367513	3	27
34	5816499	6	5957578	6	6096842	5	6234248	4	6369756	3	26
35	5818865	5	5959914	6	6099147	5	6236522	4	6371999	2	25
36	5821230	5	5962250	5	6101452	4	6238796	3	6374241	1	24
37	5823595	4	5964585	4	6103756	4	6241069	3	6376482	2240	23
38	5825959	4	5966919	4	6106060	4	6243342	2	6378722	0	22
39	5828323	4	5969253	3	6108364	3	6245614	1	6380962	2239	21
40	5830687	3	5971586	3	6110667	3	6247885	1	6383201	9	20
41	5833050	2	5973919	2	6112970	2	6250156	2270	6385440	8	19
42	5835412	2	5976251	2	6115272	1	6252426	0	6387678	8	18
43	5837774	2	5978583	2	6117573	2300	6254696	0	6389916	7	17
44	5840136	1	5980915	1	6119873	0	6256966	2269	6392153	7	16
45	5842497	1	5983246	1	6122173	0	6259235	8	6394390	6	15
46	5844858	2360	5985577	0	6124473	2299	6261503	8	6396626	6	14
47	5847218	0	5987907	0	6126772	9	6263771	7	6398862	5	13
48	5849578	2359	5990237	9	6129071	8	6266038	7	6401097	5	12
49	5851937	8	5992566	8	6131369	8	6268305	7	6403332	4	11
50	5854295	8	5994894	8	6133667	7	6270572	6	6405566	3	10
51	5856653	7	5997222	7	6135964	7	6272838	5	6407799	3	9
52	5859010	7	5999549	7	6138261	6	6275103	5	6410032	2	8
53	5861367	7	6001876	6	6140557	6	6277368	4	6412264	2	7
54	5863724	6	6004202	6	6142853	6	6279632	3	6414496	2	6
55	5866080	6	6006528	5	6145148	4	6281895	3	6416728	1	5
56	5868436	5	6008853	5	6147442	5	6284158	2	6418959	2230	4
57	5870791	4	6011178	4	6149746	4	6286420	2	6421189	0	3
58	5873145	4	6013502	4	6152030	4	6288682	1	6423419	2229	2
59	5875499	3	6015826	4	6154323	3	6290943	1	6425648	8	1
60	5877852	3	6018150	3	6156615	2	6293204	0	6427876	8	0
	54		53		52		51		50		

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1	6430104	2227	6562785	2194	6693468	1	6822111	2126	6948676	1	59
2	6432331	7	6564979	4	6695625	2160	6824237	6	6950767	1	58
3	6434558	7	6567173	4	6697785	0	6826363	6	6952858	1	57
4	6436785	6	6569367	3	6699949	2159	6828489	5	6954949	2090	56
5	6439011	5	6571560	3	6702108	9	6830614	4	6957039	2089	55
6	6441236	5	6573753	2	6704267	8	6832738	3	6959128	8	54
7	6443461	4	6575945	1	6706421	7	6834861	3	6961216	8	53
8	6445685	4	6578136	2190	6708582	7	6836984	3	6963304	8	52
9	6447909	3	6580326	0	6710739	6	6839107	2	6965392	7	51
10	6450132	3	6582516	2189	6712895	6	6841229	1	6967479	6	50
11	6452355	2	6584705	9	6715051	5	6843350	1	6969565	6	49
12	6454577	2	6586894	8	6717206	5	6845471	2120	6971651	5	48
13	6456799	1	6589082	8	6719361	4	6847591	0	6973736	5	47
14	6459020	2220	6591270	8	6721515	3	6849711	2119	6975821	4	46
15	6461240	0	6593458	7	6723668	3	6851830	9	6977905	3	45
16	6463460	2219	6595645	6	6725821	2	6853949	8	6979988	3	44
17	6465679	9	6597831	5	6727973	2	6856067	7	6982071	2	43
18	6467898	8	6600016	5	6730125	1	6858184	7	6984153	2	42
19	6470116	7	6602201	5	6732276	1	6860301	6	6986235	1	41
20	6472333	7	6604386	4	6734427	2150	6862417	6	6988316	2080	40
21	6474550	6	6606570	3	6736577	2149	6864533	5	6990396	0	39
22	6476766	6	6608753	3	6738726	9	6866648	4	6992476	2079	38
23	6478982	6	6610936	2	6740875	9	6868762	4	6994555	9	37
24	6481198	5	6613118	2	6743024	8	6870876	3	6996634	8	36
25	6483413	5	6615300	1	6745172	7	6872989	3	6998712	7	35
26	6485628	4	6617481	2180	6747319	6	6875102	2	7000789	7	34
27	6487842	3	6619661	0	6749465	6	6877214	1	7002866	6	33
28	6490055	3	6621841	0	6751611	6	6879325	1	7004942	6	32
39	6492265	2	6624021	2179	6753757	5	6881436	2110	7007013	5	31
30	6494430	2	6626200	9	6755902	5	6883546	0	7009093	4	30

	49		48		47		46		45		

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31	8704989	1	8789559	7	8871451	2	8950642	7	9027105	1	29
32	8706420	1	8790946	6	8872793	1	8951939	6	9028356	1250	28
33	8707851	1430	8792332	5	8874134	1	8953235	5	9029606	0	27
34	8709281	1432	8793717	5	8875475	1340	8954530	4	9030856	1249	26
35	8710710	8	8795102	4	8876815	1339	8955824	3	9032105	8	25
36	8712138	7	8796486	3	8878154	8	8957117	3	9033353	7	24
37	8713565	7	8797869	2	8879492	8	8958410	2	9034600	7	23
38	8714992	6	8799251	2	8880830	7	8959702	2	9035847	6	22
39	8716416	6	8800633	1	8882167	6	8960994	1	9037093	5	21
40	8717844	5	8802014	1380	8883503	5	8962285	1290	9038338	4	20
41	8719269	4	8803394	1379	8884838	4	8963575	1280	9039582	3	19
42	8720693	3	8804773	8	8886172	4	8964864	8	9040825	3	18
43	8722116	2	8806152	8	8887506	3	8966152	6	9042068	2	17
44	8723538	2	8807530	7	8888839	2	8967440	7	9043310	1	16
45	8724960	1	8808907	6	8890171	1	8968727	6	9044551	1240	15
46	8726381	1420	8810283	6	8891502	1	8970013	6	9045791	0	14
47	8727801	0	8811659	5	8892833	1330	8971299	5	9047031	1239	13
48	8729221	1419	8813034	4	8894163	1329	8972584	4	9048270	8	12
49	8730640	8	8814408	3	8895492	3	8973868	3	9049508	8	11
50	8732058	7	8815783	2	8896821	2	8975151	2	9050746	7	10
51	8733475	6	8817155	2	8898149	2	8976433	2	9051983	6	9
52	8734891	6	8818527	1	8899476	1	8977715	1	9053219	5	8
53	8736307	5	8819898	1370	8900802	1370	8978996	1280	9054454	4	7
54	8737722	5	8821268	0	8902127	0	8980276	1279	9055688	4	6
55	8739137	4	8822638	1369	8903452	1369	8981555	8	9056922	3	5
56	8740551	3	8824007	8	8904776	8	8982833	8	9058155	2	4
57	8741964	2	8825375	1	8906099	8	8984111	7	9059387	1	3
58	8743376	1	8826743	1410	8907422	7	8985388	6	9060618	1230	2
59	8744787	1410	8828110	0	8908744	6	8986664	1	9061898	0	1
60	8746197	0	8829476		8910065	5	8987940	1320	9063078	1229	0
	29		**28**		**27**		**26**		**25**		

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1	9064307	1228	9136638	2	9206185	5	9272928	9	9336846	1	59
2	9065535	8	9137820	1	9207321	5	9274017	8	9337887	1	58
3	9066763	7	9139001	0	9208456	4	9275105	7	9338923	1040	57
4	9067990	6	9140181	1180	9209590	3	9276192	6	9339955	1039	56
5	9069216	5	9141361	1179	9210723	2	9277278	5	9341007	8	55
6	9070441	4	9142540	8	9211855	1	9278363	1	9342045	7	54
7	9071665	4	9143718	7	9212936	7	9279448	0	9343084	3	53
8	9072889	3	9144895	7	9214117	7	9280532	1130	9344112	3	52
9	9074112	2	9146072	6	9215247	6	9281615	1129	9345155	2	51
10	9075334	1	9147248	5	9216376	9	9282697	8	9346190	1	50
11	9076555	0	9148423	4	9217504	7	9283778	7	9347224	1	49
12	9077775	1220	9149597	3	9218631	7	9284859	7	9348257	2	48
13	9078995	1219	9150770	3	9219758	6	9285939	1072	9349289	2	47
14	9080214	8	9151943	2	9220884	6	9287018	8	9350321	1	46
15	9081432	8	9153115	1	9222010	5	9288096	7	9351352	1030	45
16	9082649	7	9154286	1	9223135	4	9289173	7	9352382	1029	44
17	9083866	6	9155457	1170	9224259	3	9290250	6	9353411	9	43
18	9085082	5	9156627	1169	9225384	2	9291326	5	9354440	8	42
19	9086297	5	9157796	8	9226504	1	9292401	5	9355468	7	41
20	9087512	4	9158964	7	9227625	1	9293476	4	9356493	6	40
21	9088726	3	9160131	6	9228746	1120	9294550	3	9357521	5	39
22	9089939	2	9161297	6	9229866	1119	9295623	2	9358546	5	38
23	9091151	1	9162463	5	9230985	8	9296695	1	9359571	4	37
24	9092362	1210	9163628	4	9232103	7	9297766	1070	9360595	3	36
25	9093572	1209	9164792	3	9233220	6	9298836	1062	9361618	2	35
26	9094781	9	9165955	2	9234337	6	9299905	9	9362640	2	34
27	9095990	8	9167117	2	9235453	5	9300974	8	9363662	1	33
28	9097198	8	9168279	1	9236568	4	9302042	7	9364583	1020	32
39	9098405	7	9169440	1	9237682	3	9303109	7	9365703	1019	31
30	9099613	6	9170601	1160	9238795	3	9304176	6	9366722	8	30
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#	65		66		67		68		69		#
31	9100819										
32	9102024	5	9171761	1152	9239900	2	9305242	5	9367740	8	29
33	9103228	4	9172920	8	9241020	1	9306307	4	9368758	7	28
		4	9174078	7	9242131	1	9307371	3	9369775	6	27
34	9104432										
35	9105635	3	9175235	6	9243242		9308434	3	9370791	5	26
36	9106837	2	9176391	6	9244352	1110	9309497	2	9371806	4	25
		1	9177547	5	9245461	1105	9310559	1	9372820	4	24
37	9108038					8					
38	9109238	0	9178702	4	9246565	7	9311620	1060	9373834	3	23
39	9110433	1200	9179856	3	9247676	6	9312680	1059	9374847	2	22
		1199	9181009	2	9248782	6	9313739	9	9375859	1	21
40	9111637										
41	9112835	8	9182161	2	9249883	5	9314799	8	9376870	1010	20
42	9114032	7	9183313	1	9250993	4	9315856	7	9377880	1009	19
		7	9184464	1150	9252092	3	9316913	6	9378889	9	18
43	9115229										
44	9116425	6	9185614	1149	9253206	3	9317969	5	9379898	8	17
45	9117620	5	9186763	9	9254303	2	9319024	5	9380906	9	16
		4	9187912	8	9255405	1	9320079	4	9381913	6	15
46	9118814										
47	9120007	3	9189060	7	9256506	0	9321133	3	9382919	6	14
48	9121200	3	9190207	6	9257606	1100	9322186	2	9383925	5	13
		2	9191353	6	9258706	1099	9323238	2	9384930	4	12
49	9122392										
50	9123584	2	9192499	5	9259805	8	9324290	1	9385934	3	11
51	9124775	1	9193644	4	9260903	7	9325341	1050	9386937	2	10
		1190	9194788	3	9262000	6	9326391	1049	9387939	2	9
52	9125965										
53	9127154	1189	9195931	2	9263096	6	9327440	8	9388941	1	8
54	9128342	8	9197073	1	9264192	5	9328488	7	9389942	1000	7
		7	9198215	1	9265287	4	9329535	7	9390942	999	6
55	9129529										
56	9130716	7	9199356	1140	9266381	3	9330582	6	9391941	9	5
57	9131902	8	9200635	1139	9267474	2	9331628	4	9392940	8	4
		5	9201635	9	9268566	2	9332673	4	9393938	7	3
58	9133087										
59	9134271	4	9202774	8	9269658	1	9333717	4	9394935	6	2
60	9135455	4	9203912	8	9270749	1090	9334761	3	9395931	5	1
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24	23	22	21	20

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1	9397921	4	9456133	6	9511464	8	9563898	849	9613418	1	59
2	9398915	3	9457079	5	9512362	7	9564747	9	9614219	800	58
3	9399903	2	9458024	4	9513259	6	9565595	8	9615019	799	57
4	9400900	1	9458968	3	9514155	5	9566444	7	9615818	3	56
5	9401891	1	9459911	3	9515050	4	9567291	6	9616616	7	55
6	9402882	590	9460854	2	9515944	4	9568137	5	9617413	6	54
7	9403872	939	9461796	1	9516838	3	9568982	4	9618209	6	53
8	9404861	8	9462737	940	9517731	2	9569826	4	9619005	5	52
9	9405849	7	9463677	939	9518623	1	9570670	3	9619800	4	51
10	9406836	6	9464616	9	9519514	0	9571513	2	9620594	3	50
11	9407822	6	9465555	8	9520404	890	9572355	1	9621387	2	49
12	9408808	5	9466493	7	9521294	889	9573196	840	9622179	2	48
13	9409793	4	9467430	6	9522183	8	9574036	839	9622971	1	47
14	9410777	3	9468366	5	9523071	7	9574875	9	9623762	790	46
15	9411760	2	9469301	5	9523958	6	9575714	8	9624552	789	45
16	9412742	2	9470236	4	9524844	6	9576552	7	9625341	8	44
17	9413724	1	9471170	3	9525730	5	9577389	6	9626129	8	43
18	9414705	0	9472103	2	9526615	4	9578225	6	9626917	7	42
19	9415685	980	9473035	2	9527499	3	9579061	5	9627704	6	41
20	9416665	979	9473967	1	9528382	2	9579898	4	9628490	5	40
21	9417644	8	9474898	930	9529264	2	9580730	3	9629275	4	39
22	9418622	7	9475828	929	9530146	1	9581563	2	9630059	4	38
23	9419599	6	9476757	8	9531027	880	9582395	1	9630843	3	37
24	9420575	5	9477685	7	9531907	879	9583226	1	9631626	2	36
25	9421550	5	9478612	7	9532786	8	9584057	830	9632408	1	35
26	9422525	4	9479539	6	9533664	7	9584887	829	9633189	780	34
27	9423499	3	9480465	5	9534541	7	9585716	8	9633969	779	33
28	9424472	2	9481390	4	9535418	6	9586544	7	9634748	9	32
29	9425444	1	9482314	3	9536294	5	9587371	6	9635527	8	31
30	9426415	1	9483237	3	9537169	4	9588197	5	9636305	7	30
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31	9427386	970	9484160	2	9538043	4	9589023	5	9637032	6	29
32	9428356	969	9485082	1	9538917	3	9589848	4	9637858	5	28
33	9429325	8	9486003	920	9539790	2	9590672	3	9638633	5	27
34	9430293	7	9486923	919	9540662	1	9591499	3	9639408	4	26
35	9431260	7	9487842	9	9541533	870	9592318	2	9640182	3	25
36	9432227	6	9488761	8	9542403	869	9593146	1	9640955	2	24
37	9433193	5	9489679	7	9543272	9	9593961	820	9641727	1	23
38	9434158	4	9490596	6	9544141	8	9594781	819	9642498	0	22
39	9435122	3	9491512	5	9545009	7	9595600	9	9643268	770	21
40	9436085	3	9492427	4	9545876	6	9596419	8	9644018	769	20
41	9437048	2	9493341	4	9546742	5	9597237	7	9644807	8	19
42	9438010	1	9494255	3	9547607	5	9598054	6	9645575	7	18
43	9438971	960	9495168	2	9548472	4	9598870	5	9646342	6	17
44	9439931	959	9496080	1	9549336	3	9599685	4	9647108	5	16
45	9440890	9	9496991	1	9550199	2	9600499	4	9647873	5	15
46	9441849	8	9497902	910	9551061	1	9601313	3	9648638	4	14
47	9442807	7	9498812	909	9551922	1	9602126	2	9649402	3	13
48	9443764	7	9499721	8	9552783	860	9602938	1	9650165	2	12
49	9444720	6	9500629	7	9553643	859	9603749	810	9650927	2	11
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51	9446631	4	9502443	6	9555360	7	9605368	9	9652450	760	9
52	9447585	3	9503349	5	9556217	7	9606177	8	9653210	759	8
53	9448538	2	9504254	4	9557074	6	9606985	7	9653969	8	7
54	9449490	1	9505158	3	9557930	5	9607792	6	9654727	7	6
55	9450441	1	9506061	2	9558785	4	9608598	5	9655484	6	5
56	9451392	950	9506963	2	9559639	3	9609403	5	9656240	6	4
57	9452342	949	9507865	1	9560492	3	9610208	4	9656996	5	3
58	9453291	8	9508766	903	9561345	2	9611012	3	9657751	4	2
59	9454239	7	9509666	899	9562197	1	9611815	2	9658505	3	1
60	9455136	7	9510565	9	9563048	850	9612617	1	9659258	3	0

19	18	17	16	15

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1	9660011	2	9703660	3	9744355	3	9782080	4	9816827	4	
2	9660763	1	9704363	2	9745008	2	9782684	3	9817381	3	59
3	9661514	750	9705065	1	9745660	2	9783237	2	9817934	2	57
4	9662264	749	9705766	700	9746312	1	9783889	1	9818486	1	56
5	9663013	8	9706466	699	9746963	650	9784490	600	9819037	550	55
6	9663761	7	9707165	8	9747613	649	9785090	599	9819537	0	54
7	9664508	7	9707863	8	9748262	8	9785689	9	9820137	549	53
8	9665255	6	9708561	7	9748910	7	9786239	8	9820686	8	52
9	9666001	5	9709258	6	9749557	6	9786836	7	9821234	7	51
10	9666746	4	9709954	5	9750203	6	9787483	6	9821781	6	50
11	9667490	3	9710649	4	9750849	5	9788079	5	9822227	5	49
12	9668233	3	9711343	3	9751494	4	9788674	4	9822872	5	48
13	9668976	2	9712036	3	9752138	3	9789268	4	9823417	4	47
14	9669718	1	9712729	2	9752781	2	9789862	3	9823961	3	46
15	9670459	740	9713421	1	9753423	2	9790455	2	9824504	2	45
16	9671199	739	9714112	690	9754065	1	9791047	1	9825046	1	44
17	9671938	9	9714802	689	9754706	640	9791638	0	9825587	1	43
18	9672677	8	9715491	9	9755346	639	9792228	590	9826128	549	42
19	9673415	7	9716180	8	9755985	3	9792818	581	9826668	539	41
20	9674152	6	9716868	7	9756623	7	9793407	8	9827207	8	40
21	9674888	5	9717555	6	9757260	7	9793995	7	9827744	7	39
22	9675623	4	9718241	5	9757897	6	9794582	6	9828282	6	38
23	9676357	4	9718926	4	9758533	5	9795168	5	9828818	6	37
24	9677091	3	9719610	4	9759168	4	9795753	4	9829354	5	36
25	9677824	2	9720294	3	9759802	3	9796337	4	9829889	4	35
26	9678556	1	9720977	2	9760435	2	9796921	3	9830423	3	34
27	9679287	730	9721659	1	9761067	2	9797504	2	9830956	2	33
28	9680017	0	9722340	680	9761699	1	9798086	1	9831488	1	32
29	9680747	729	9723020	679	9762330	630	9798667	0	9832019	0	31
30	9681476	8	9723699	9	9762960	620	9799247	580	9832540	530	30

| | 14 | | 13 | | 12 | | 11 | | 10 | | |

	75		76		77		78		79		
31	9682204	7	9724378	8	9763589	8	9799827	57	9833079	52	29
32	9682931	6	9725056	7	9754217	8	9800406	8	9833608	8	28
33	9683657	6	9725733	6	9764845	7	9800984	7	9834136	7	27
34	9684383	5	9726407	6	9765472	6	9801561	6	9834663	6	26
35	9685108	4	9727085	5	9765090	5	9802137	5	9835189	5	25
36	9685832	3	9727760	4	9766723	4	9802712	4	9835714		24
37	9686555	2	9728434	3	9767347	3	9803287	4	9836239	4	23
38	9687277	1	9729107	2	9767970	3	9803861	3	9836763	3	22
39	9687998	1	9729779	1	9768593	1	9804434	2	9837286	2	21
40	9688719	720	9730450	670	9769215	1	9805006	1	9837808	1	20
41	9689439	719	9731120	669	9769836	620	9805577	570	9838329	1	19
42	9690158	8	9731789	9	9770456	619	9806147	569	9838850	520	18
43	9690876	7	9732458	8	9771075	8	9806716	9	9839370	519	17
44	9691593	6	9733126	7	9771693	8	9807285	8	9839889	8	16
45	9692309	6	9733793	6	9772311	7	9807853	7	9840407	7	15
46	9693025	5	9734459	5	9772928	6	9808420	6	9840924	6	14
47	9693740	4	9735124	5	9773544	5	9808986	5	9841440	6	13
48	9694454	3	9735789	4	9774159	4	9809551	4	9841956	5	12
49	9695167	2	9736453	3	9774773	4	9810116	4	9842471	4	11
50	9695879	1	9737116	2	9775387	3	9810680	3	9842985	3	10
51	9696590	1	9737778	1	9776000	2	9811243	2	9843498	2	9
52	9697301	710	9738439	660	9776612	1	9811805	1	9844010	1	8
53	9698011	709	9739099	0	9777223	610	9812366	0	9844521	0	7
54	9698720	8	9739759	659	9777833	609	9812926	560	9845032	510	6
55	9699428	7	9740418	8	9778442	8	9813486	559	9845542	509	5
56	9700135	7	9741076	7	9779050	8	9814045	8	9846051	8	4
57	9700842	6	9741733	6	9779651	7	9814603	7	9846559	7	3
58	9701548	5	9742389	6	9780265	6	9815160	6	9847066	6	2
59	9702253	4	9743045	5	9780871	6	9815716	6	9847572	6	1
60	9702957	3	9743700	5	9781476	5	9816272	5	9848078	5	0
	14		13		12		11		10		

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	80		81		82		83		84		
1	9848583	4	9877338	4	9903085	4	9925816	3	9945523	3	59
2	9849087	3	9877792	3	9903489	3	9926169	2	9945826	2	58
3	9849590	2	9878245	2	9903892	2	9926521	2	9946128	1	57
4	9850092	1	9878697	1	9904294	1	9926873	1	9946429	1	56
5	9850593	0	9879148	0	9904695	0	9927224	400	9946729	300	55
6	9851093	500	9879598	450	9905095	450	9927574	399	9947028	299	54
7	9851593	499	9880048	449	9905494	9	9927923	9	9947327	6	53
8	9852092	8	9880497	8	9905893	8	9928271	8	9947625	8	52
9	9852290	7	9880945	7	9906291	7	9928618	7	9947922	7	51
10	9853087	6	9881392	6	9906688	6	9928965	6	9948218	5	50
11	9853583	6	9881838	5	9907084	5	9929311	5	9948513	4	49
12	9854079	5	9882283	5	9907479	4	9929656	4	9948807	3	48
13	9854574	4	9882728	4	9907873	3	9930000	3	9949100	3	47
14	9855068	3	9883172	3	9908266	3	9930343	2	9949393	2	46
15	9855561	2	9883615	2	9908659	2	9930685	1	9949685	1	45
16	9856053	1	9884057	1	9909051	1	9931028	1	9949976	290	44
17	9856544	1	9884498	0	9909442	390	9931367	340	9950266	289	43
18	9857035	490	9884938	440	9909832	389	9931707	339	9950555	9	42
19	9857525	439	9885378	439	9910221	9	9932046	8	9950844	3	41
20	9858014	8	9885817	8	9910610	8	9932384	7	9951132	7	40
21	9858502	7	9886255	7	9910998	7	9932721	7	9951419	6	39
22	9858989	6	9886692	6	9911385	6	9933057	6	9951705	5	38
23	9859475	6	9887128	6	9911771	5	9933393	5	9951990	4	37
24	9859961	5	9887564	5	9912156	5	9933728	4	9952274	3	36
25	9860446	4	9887999	4	9912540	4	9934062	3	9952557	3	35
26	9860930	3	9888433	3	9912923	3	9934395	3	9952840	2	34
27	9861413	2	9888866	2	9913306	2	9934727	2	9953122	1	33
28	9861895	1	9889298	1	9913688	1	9935058	1	9953403	280	32
29	9862376	0	9889729	0	9914069	430	9935389	330	9953683	279	31
30	9862856	480	9890159	480	9914449	429	9935719	329	9953962	8	30

9	8	7	6	5

IN CIRCVLO RECTARVM LINEARVM.

	80		81		82		83		84		
31	9863336	479	9890538	9	9914328	8	9936048	8	9954240	8	29
32	9863815	8	9891017	8	9915206	8	9936376	7	9954518	7	28
33	9864293	7	9891445	7	9915584	7	9936703	6	9954795	6	27
34	9864770	6	9891872	6	9915961	6	9937029	6	9955071	5	26
35	9865246	6	9892298	5	9916337	5	9937355	5	9955346	4	25
36	9865722	5	9892723	4	9916712	4	9937680	4	9955620	3	24
37	9866197	4	9893147	4	9917086	3	9938004	3	9955893	2	23
38	9866671	3	9893571	3	9917459	3	9938327	2	9956166	2	22
39	9867144	2	9893994	2	9917832	2	9938649	1	9956437	1	21
40	9867616	1	9894416	1	9918204	1	9938970	320	9956708	270	20
41	9868087	0	9894837	0	9918575	370	9939290	319	9956978	269	19
42	9868557	470	9895257	420	9918945	369	9939609	9	9957247	8	18
43	9869027	469	9895677	419	9919314	8	9939928	8	9957515	7	17
44	9869496	8	9896096	8	9919682	7	9940246	7	9957782	7	16
45	9869964	7	9896514	7	9920049	7	9940563	7	9958049	6	15
46	9870431	6	9896931	6	9920416	6	9940879	6	9958315	5	14
47	9870897	5	9897347	5	9920782	5	9941194	5	9958580	4	13
48	9871362	5	9897762	5	9921147	4	9941509	4	9958844	3	12
49	9871827	4	9898177	4	9921511	3	9941823	3	9959107	3	11
50	9872291	3	9898591	3	9921874	2	9942136	2	9959370	2	10
51	9872754	2	9899004	2	9922236	2	9942448	1	9959632	1	9
52	9873216	1	9899416	1	9922598	1	9942759	310	9959893	260	8
53	9873677	0	9899827	410	9922959	360	9943069	0	9960153	259	7
54	9874137	460	9900237	409	9923319	359	9943379	309	9960412	8	6
55	9874597	459	9900646	9	9923678	8	9943688	8	9960670	7	5
56	9875056	8	9901055	8	9924036	7	9943996	7	9960927	6	4
57	9875514	7	9901463	7	9924393	7	9944303	7	9961183	6	3
58	9875971	6	9901870	6	9924750	6	9944609	6	9961438	5	2
59	9876427	6	9902276	5	9925106	5	9944914	5	9961693	4	1
60	9875833	5	9902681	4	9925461	4	9945219	5	9961947	3	0
	9		8		7		6		5		

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	85		86		87		88		89		
1	9962200	2	9975843	2	9986447	1	9994009	100	9998527	49	59
2	9962452	1	9976045	1	9986598	150	9994109	99	9998576	9	58
3	9962703	1	9976246	200	9986748	149	9994208	9	9998625	8	57
4	9962954	250	9976449	199	9986897	8	9994307	8	9998673	57	56
5	9963204	249	9976645	8	9987045	8	9994405	7	9998720	6	55
6	9963453	8	9976843	7	9987193	7	9994502	6	9998766	5	54
7	9963701	7	9977040	7	9987340	6	9994598	5	9998811	4	53
8	9963948	6	9977237	6	9987436	5	9994693	4	9998855	4	52
9	9964194	6	9977433	5	9987631	4	9994787	4	9998899	3	51
10	9964440	5	9977628	4	9987775	3	9994881	3	9998942	2	50
11	9964685	4	9977822	3	9987918	3	9994974	2	9998984	1	49
12	9964929	3	9978015	2	9988061	2	9995066	1	9999025	40	48
13	9965172	2	9978207	1	9988203	1	9995157	50	9999065	39	47
14	9965414	1	9978398	1	9988344	140	9995247	89	9999104	9	46
15	9965655	0	9978589	190	9988484	139	9995336	8	9999143	8	45
16	9965895	240	9978779	189	9988623	8	9995424	8	9999181	7	44
17	9966135	239	9978968	8	9988761	8	9995512	7	9999218	6	43
18	9966374	8	9979156	7	9988899	7	9995599	6	9999254	5	42
19	9966612	7	9979343	7	9989036	6	9995685	5	9999289	4	41
20	9966849	6	9979530	6	9989172	5	9995770	4	9999323	3	40
21	9967085	5	9979716	5	9989307	4	9995854	3	9999356	3	39
22	9967320	5	9979901	4	9989441	3	9995937	2	9999389	2	38
23	9967555	4	9980085	3	9989574	2	9996019	2	9999421	1	37
24	9967739	3	9980268	2	9989706	1	9996101	1	9999452	30	36
25	9968022	2	9980450	1	9989837	1	9996182	1	9999482	29	35
26	9968254	1	9980631	180	9989968	130	9996262	80	9999511	8	34
27	9968485	210	9980811	0	9990098	129	9996341	8	9999539	7	33
28	9968715	229	9980991	179	9990227	8	9996419	7	9999566	7	32
29	9968944	9	9981170	8	9990355	7	9996496	7	9999593	6	31
30	9969173	8	9981348	7	9990482	6	9996573	6	9999619	5	30
	4		3		2		1		0		

	85		86		87		88		89		
31	9969401	7	9981525	6	9990608	6	9996649	5	9999644	4	29
32	9969628	6	9981701	6	9990734	5	9996724	4	9999668	3	28
33	9969854	5	9981877	5	9990859	4	9996798	3	9999691	2	27
34	9970079	5	9982052	4	9990983	3	9996871	2	9999713	2	26
35	9970304	4	9982226	3	9991106	2	9996943	1	9999735	1	25
36	9970528	3	9982399	2	9991228	1	9997014	1	9999756	20	24
37	9970751	2	9982571	1	9991349	1	9997085	70	9999776	19	23
38	9970973	1	9982742	0	9991470	120	9997155	69	9999795	8	22
39	9971194	220	9982912	170	9991590	0	9997224	8	9999813	7	21
40	9971414	219	9983082	169	9991710	119	9997292	7	9999830	6	20
41	9971633	8	9983251	8	9991827	8	9997359	6	9999846	6	19
42	9971851	8	9983419	7	9991944	6	9997425	5	9999862	5	18
43	9972069	7	9983586	6	9992060	5	9997491	5	9999877	4	17
44	9972285	6	9983752	5	9992175	5	9997556	4	9999891	3	16
45	9972502	5	9983917	4	9992290	4	9997620	3	9999904	1	15
46	9972717	4	9984081	4	9992404	4	9997683	2	9999916	1	14
47	9972931	4	9984245	3	9992517	3	9997745	1	9999927	1	13
48	9973145	3	9984408	2	9992629	2	9997806	1	9999938	10	12
49	9973358	2	9984570	1	9992740	1	9997867	60	9999948	9	11
50	9973570	1	9984731	160	9992850	0	9997927	59	9999957	8	10
51	9973781	210	9984891	159	9992960	102	9997986	8	9999965	7	9
52	9973991	209	9985050	9	9993069	8	9998044	7	9999972	6	8
53	9974200	8	9985209	8	9993177	7	9998101	6	9999978	6	7
54	9974408	7	9985367	7	9993284	6	9998157	5	9999984	5	6
55	9974615	7	9985524	6	9993390	5	9998212	5	9999989	4	5
56	9974822	6	9985680	5	9993495	4	9998267	4	9999993	3	4
57	9975028	5	9985835	4	9993599	4	9998321	3	9999996	2	3
58	9975233	4	9985989	4	9993703	3	9998374	2	9999998	1	2
59	9975437	3	9986143	2	9993806	2	9998426	1	9999999	1	1
60	9975640	3	9986295	2	9993908	1	9998477	50	1000000	0	0
	4		**3**		**2**		**1**		**0**		

FINIS.