

lindrice excavato conversione plani ZYC circa rectam AF facto. Sin adhuc fecerur plano $\xi v x$ basi parallelo, segmentum $\phi \xi v x$ æquabitur solido ex conversione plani ZYC circa rectam ZY facto. Nam & hic eodem modo ostenderur, triangulum $v x \phi$ æquale circulo radii $v x$; & de reliquis similiter.

Solidū axis
FC.

Fig. 4.

9. Similiter, si super semicycloide $AF C$ fig. 4. erigatur Prisma, sive Cylindri recti quadrans, altitudinem habens AV , quæ sit ad AF , ut $4 AF$ ad FC ; (nempe ut circuli Perimeter ad Radium;) secerur autem plano FCV : Solido $FVCZA$ æquatur solidum ex conversione plani $FCZA$ circa rectam FC ; & segmenta segmentis respective sumptis; puta segmentum $YZ \Psi C$ segmento conversione plani ZCY facto. Nam & hic triangulum FAV æquatur circulo radii FA ; & triangulum $YZ \Psi$ circulo radii YZ : Et sic ubique.

10. Atque hætenus quidem utrum tum planorum tum solidorum omnium expositorum dimensionem aliquatenus hac methodo tradidisse videamur: Cum tamen de Gravitatis Centris nihil hinc constet, liber in sequentibus, resumpto iterum toto negotio, rem aliter expedire, hoc modo.

Angulus
 $Z \zeta A$.

Fig. 1.

11. Ut supra ostendimus rectam zZ fig. 1. æqualem arcui zC : ita ostenderur, angulum $Z \zeta A$, hoc est zFA , arcui $Z \zeta$ sive zF , hoc est rectæ $A \zeta$, proportionalem esse: (nempe, ut arcus Fz , hoc est $A \zeta$ recta, ad arcum FzC , hoc est rectam AF , sic esse angulum $Z \zeta A$ vel zFA , ad $CF A$ rectum:) propter angulum zGF anguli zFA ubique duplum, & propterea utrumque; arcui Fz ubique proportionalem.

12. Adeoque, divisâ recta AF in partes quotlibet æquales, in punctis $\lambda, \mu, \beta, \zeta, \&c.$ ductisque rectis $\lambda L, \mu M, \beta B, \zeta Z, \&c.$ à puncto contactus ad punctum lineans, (quibus parallelæ existunt in circulo $Fl, Fm, Fb, Fz, \&c.$) anguli $L \lambda A, M \mu A, B \beta A, Z \zeta A, \&c.$ sunt Arithmetice proportionales; quorum continuus excessus primo æqualis est, nempe angulo $L \lambda A$.

13. Ductis itaque tum in Cycloide rectis $\lambda L, \mu M, \beta B, \zeta Z, \&c.$ tum ipsis respondentibus in circulo $Fl, Fm, Fb, Fz, \&c.$ distribuentur Semicyclois & Semicirculus in segmenta numero æqualia; singula singulis (respective) correspondentia.

14. Ductis item in Cycloide, a punctis $r, \zeta, \beta, \&c.$ rectis $r \sigma, \zeta \rho, \beta \sigma, \&c.$ quæ parallelæ sint rectis $\zeta Z, \beta B, \mu M, \&c.$ Erunt