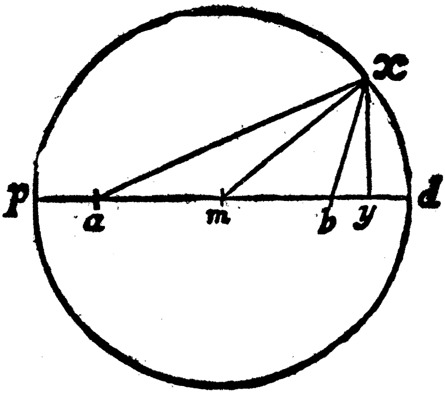
Lines *ax xb*, whose Squares together shall be equal to the Square given *gg*.




Le *axb* whose height is *xy* be the Triangle required. Bisect *ab* in *m* and draw *mx*.

*ANALYSIS.*

Let therefore $axa + xbx = gg$
But by the 13*th*. of the Introd. $axa + xbx = 2ama + 2mxm$
Therefore $gg = 2ama + 2mxm$
or $gg - 2ama = 2mxm$

Therefore the Problem is solv'd, but the Length of *mx* being given and not its Position, it is evident that it may be the Semidiameter of a Circle whose Circumference shall be the *Locus* of the point *x*.

*Construction and Demonstration.*

From the Square given *gg* Subtract the double Square of *am*, the Square root of half the remainder shall be the line *mx*; with the Center *m* and distance *mx*, describe the Circle *pxd*, I say that any point *x* taken in its Circumference resolves the Problem.

For since the double of the Squares of *am* and *xm* is equal to the Square *gg*, by the Construction, and by the 13*th*. Proposition of the Introduction to the Squares *ax* and *xb*: The two Squares *ax* and *xb* together will be equal to the Square *gg*. Which was to be done.

*FINIS.*

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ERRATA.

Page 355. l. 1. for IV. r. III. p. 356. l. 26. for III. r. IV. and for *subtract*, *subtraction*, &c. r. *substract*, &c. p. 357. l. 33. r. *Sosigenes*.