Letter from Isaac Newton to Henry Oldenburg, dated 26 October 1676

Author: Isaac Newton

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Sir.

Two dayes since I sent you an answere to M^{r}. Leibnitius excellent letter after it was gone running my eyes over a transcript that I had made to be taken of it I found some things which I could wish altered and since I cannot now do it my self I desire you would doe it for me (those things are amended in this transcript.)

I feare I have been something too severe in taking notice of some oversights in M^{r}. Leibnitius letter considering the goodness and ingenuity of the Author and that it might have beene my owne fate in writing hastily to have committed the like oversights, but yet they being I think real oversights I suppose he cannot be offended at it if you think any thing be expressed too severely pray give me notice of it and I will endeavour to mollify it unless you will doe with a word or two of your owne I beleive M^{r}. Leibnitius will not dislike the Theoreme towards the beginning of my letter (pag 5) for squaring curve lines Geometrically Sometime when I have more leisure it is possible I may send him a fuller account of it explaining how it is to be ordered for comparing curvilinear figures with one another and how the simplest figure is to be found with which a compounded curve may be compared Some other things in M^{r}. Leibnitius letter I once thought to have toucht upon as the resolution of affected æquations and the impossibility of a geometricall Quadrature of the circle in which M^{r} Gregory seemes to have tripped but I shall add one thing here that the series of æquations for the section of any angle by whole numbers which M^{r}. Tschurnhaus saith he can derive by an easy methode one from an other is conteined in that one æquation which I put in the third section of the problems in my former letter for cutting an angle in a given ratio and in another æquation like that also the coefficients of those æquations may be all obteined by this progression $1 \times \frac{\overline{n-0}\times\overline{n-1}}{1\times\overline{n-1}} \times \frac{\overline{n-2}\times\overline{n-3}}{2\times\overline{n-2}} \times \frac{\overline{n-4}\times\overline{n-5}}{3\times\overline{n-3}} \times \frac{\overline{n-6}\times\overline{n-7}}{4\times\overline{n-4}} \times$ &c The first coefficient being 1 the second $1 \times \frac{\overline{n-0}\times\overline{n-1}}{1\times\overline{n-1}}$, the third $1 \times \frac{\overline{n-0}\times\overline{n-1}}{1\times\overline{n-1}} \times \frac{\overline{n-2}\times\overline{n-3}}{2\times\overline{n-2}}$ &c and n being the number by which the Angle is to be cut. As if n be 5 then the series is $1 \times \frac{5\times4}{1\times4} \times \frac{1\times0}{3\times2}$ that is $1 \times 5 \times 1 \times 0$, and consequently the coefficients $1 \;.\; 5 \;.\; 5$ So if n be 6 the series is $1 \times \frac{6\times5}{1\times5} \times \frac{4\times3}{2\times4} \times \frac{2\times1}{3\times3} \times 0$ that is $1 \times 6 \times \frac{3}{2} \times \frac{2}{9} \times 0$ & consequently the coefficients $1 \;.\; 6 \;.\; 9 \;.\; 2$. this Scribble is not fit to be seene by any body nor **{**scarce**}** my other letter in that blotted form I sent it unless it be by a freind

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