An Answer to Four Papers of Mr. Hobs, *lately Published in the Months of* August, *and this present* September, 1671.

In the former part of his first Paper;

BY reason of a Proposition of Dr. *Wallis* (*Prop.* 1. *Cap.* 5. *De Motu*) to this purpose (for he doth not repeat it *Verbatim*:) *If there be supposed a row of Quantities infinitely many, increasing according to the natural Order of Numbers,* 1, 2, 3, &c. *or their Squares,* 1, 4, 9, &c. *or their Cubes,* 1, 8, 27, &c. *whereof the last is given. It will be a row of as many, equal to the last, in the first case, as* 1 *to* 2; *in the second case, as* 1 *to* 3; *in the third, as* 1 *to* 4, &c. (Where all that is affirmed, is but; *If we SUPPOSE That; This will Follow.* Which Consequence Mr. *Hobs* doth not deny: and therefore all that he saith to it, is but Cavilling.)

Mr. *Hobs* moves these Questions, (and proposeth them to the *Royal Society*, to pass a judgment on them.) 1. *Whether there can be understood* (he should rather have said, *supposed*) *an infinite row of Quantities, whereof the last can be given.* 2. *Whether a Finite Quantity can be divided into an Infinite Number of lesser Quantities, or a Finite quantity consist of an Infinite Number of Parts.* 3. *Whether there be any Quantity greater than Infinite,* 4. *Whether there be any Finite Magnitude of which there is no Center of Gravity.* 5. *Whether there be any Number Infinite.* 6. *Whether the Arithmetick of Infinites be of any use, for the confirming or confuting any Doctrine.*

For answer. In general, I say, 1. Whether those things *Be* or *Be not*; yea, whether they *Can* or *Cannot be*; the Proposition is not at all concerned, (which affirms nothing either way;) but, whether they can be *supposed*, or made the *supposition, in a conditional Proposition.* As when I say, *If* Mr. Hobs *were a Mathematician, he would argue otherwise*; I do not affirm that either *he is*, or ever *was*, or *will be* such. I only say (upon supposition) *If he were*, what he is not; he would not do as he doth. 2. Many of these *Quære's* have nothing to do with the Proposition: For it hath not one word concerning *Gravity*, or *Center of Gravity*, or *Greater than Infinite*. 3. That usually in *Euclide*, and all after him, by *Infinite* is meant but, *More than any assignable Finite*, though not Absolutely Infinite, or the greatest possible. 4. Nor do they mean, when Infinites are proposed, that they should

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actually Be, or be *possible to be performed;* but only, that they be *supposed*. (It being usual with them, upon *supposition* of things *Impossible*, to infer useful Truths.) And *Euclide* (in his second *Postulate*) requiring, *the producing a streight line Infinitely, either way;* did not mean, that it should be *actually performed*, (for it is not possible for any man to produce a streight line Infinitely;) but, that it be *supposed*. And if AB * be *supposed* so produced, though but one way; its length must be *supposed* to become *Infinite* (or *more than any Finite length assignable;*) For, if but *Finite*, a Finite production would serve. But, if so produced both ways; it will be yet *Greater*, that is, *Greater than that Infinite*, or Greater than was necessary to make it more than any Finite length assignable. (And whoever doth thus *suppose Infinites;* must consequently *suppose, One Infinite greater than another*.) Again, when (by *Euclide's* tenth Proposition) the same AB *, may be *Bisected* in M. and each of the halves in *m*, and so onwards, *Infinitely*: it is not his meaning (when such continual section is proposed) that it should be *actually done*, (for, who can do it?) but that it be *supposed*. And upon such (*supposed*) section *infinitely continued*, the parts must be (*supposed*) *infinitely many;* for no *Finite* number of parts would suffice for *Infinite* sections. And if further, the same AB so divided, be *supposed* the side of a Triangle ABC *; and, from each point of division, *supposed* lines (as mc, Mc, &c.) parallel to BC: these parallels (reckoning downward from A to BC) must consequently be (*supposed*) *infinitely many;* and those, in *Arithmetical progression*, as 1, 2, 3, &c. each exceeding its Antecedent as much as that exceeds the next before it;) and, *whereof the last* (BC) *is given*: (and their Squares, as 1, 4, 9, &c. their Cubes, as 1, 8, 27, &c.) And this I say, to shew that the *supposition of Infinites* (with these attendants) is not so new, or so *Peculiar* to *Cavallerius* or Dr. *Wallis*, but that *Euclide* admits it, and all Mathematicians with him; as at least *supposable*, whether *Possible* or not.

* See *Tab*. 1. *n*. II.

* See *Tab*. 1. *n*. III.

* See *Tab*. 1. *n*. IV.

In particular, therefore, to his *Quære's*, I answer, 1. There may be *supposed* a row of Quantities *Infinitely many*, and *continually increasing*, (as the supposed parallels in the Triangle ABC, reckoning downwards from A to BC,) *whereof the last* (BC) *is given*. 2. A Finite Quantity (as AB) may be *supposed*

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(by such continual Bisections) divisible into a number of parts *Infinitely many* (or, more than any Finite number assignable:) For there is no stint beyond which such division may not be *supposed* to be continued; (for still the last, how small soever, will have two halves.) And, all those Parts *were in* the Undivided whole; (else, where should they be had?) 3. Of *supposed* Infinites, one may be *supposed* greater than another: As a, *supposed*, infinite number of *Men*, may be *supposed* to have a *Greater* number of eyes. 4. A surface, or solid, may be *supposed* so constituted, as to be *Infinitely Long*, but *Finitely Great*, (the Breadth continually Decreasing in greater proportion than the Length Increaseth,) and so as to have *no Center of Gravity*. Such is *Toricellio's Solidum Hyperbolicum acutum*; and others innumerable, discovered by Dr. *Wallis*, Monsieur *Fermat*, and others. But to determine this, requires more of *Geometry and Logick* than Mr. *Hobs* is Master of. 5. There may be *supposed* a number *Infinite*; that is, greater than any assignable Finite: As the *supposed* number of parts, arising from a *supposed* Section *Infinitely continued*. 6. There is therefore no reason, on this account, why the Doctrin of *Euclide*, *Cavallerius*, or Dr. *Wallis*, should be rejected as of no use.

But having solved these *Quære's*, I have some for Mr. *Hobs* to answer, which will not so easily be dispatched by him. For though *Supposed Infinites* will serve the Mathematicians well enough: yet, howsoever he please to prevaricate (which, he saith, is *for his Exercise*,) Mr. *Hobs* himself is more concerned than they, to solve such *Quære's*. Let him ask himself therefore, if he be still of opinion, that *there is no Argument in nature to prove, the World had a Beginning*: 1. Whether, in case it had not, there must not have passed an *Infinite number of years* before Mr. *Hobs* was born. (For, if but *Finite*, how many soever, it must have begun so many years before.) 2. Whether, now, there have not passed *more*; that is, *more than that infinite* number. 3. Whether, in that *Infinite* (or *more than infinite*) number of *Years*, there have not been a *Greater* number of *Days* and *Hours*: and, of which hitherto, *the last is given*. 4. Whether, if this be an Absurdity, we have not then (contrary to what Mr. *Hobs* would perswade us) an *Argument in nature* to prove, *the world had a beginning*. Nor are we beholden to Mr. *Hobs* for this Argument; for it was an Argument in use before Mr. *Hobs* was born. Nor can he serve him-

self

ſelf (as the Mathematicians do) with *ſuppoſed Infinites*; For his Infinites, and more than Infinites of Years, Days, and Hours, *already paſt*, muſt be *Real Infinites*, and which have *actually exiſted*, and whereof the *laſt is given*; (and yet there are more to follow.) Mr. *Hobs* ſhall do well (for his Exerciſe) to ſolve *theſe*, before he propoſe more *Quære's* of *Infinites*. And this I ſay, to ſhew that Mr. *Hobs* is, as much as any, concerned to ſolve the *Quære's* by himſelf propoſed.

In the latter part of his firſt Paper,

HE gives us (out of his *Roſet. Prop.* 5.) this Attempt of *Squaring the Circle. ſuppoſe* DT *be* $\frac{2}{5}$DC, *and* DR *a mean proportional between* DC *and* DT: *the Semidiameter* DC *will be equal to the Quadrantal Arc* RS, *and* DR *to* TV.

That the thing is falſe, is already ſhewed in the Latin Confutation of his *Roſetum*, publiſhed in the *Philoſophical Tranſactions* for *July* laſt paſt.

As it is now in the Engliſh; his Demonſtration is peccant in theſe words, (*Col.* 2. *lin.* 31, 32, 33.) *Therefore -- the Arc on* TV, *the Arc on* RS, *the Arc on* CA, *cannot be in continual proportion*; (with all that follows:) There being no ground for ſuch Conſequence.

And the thing is manifeſt *; for ſince that, by his conſtruction,
DC. CA. Arc on CA extended ∺ } are *in the ſame cantinual pro-*
DR. RS. Arc on RS extended ∺ } *portion, of the Semidiameter*
DT. TV. Arc on TV extended ∺ } *to the Quadrantal Arc*;

Let that proportion be *what you will*; ſuppoſe, as 1 to 2; and conſequently, DC to CA being as 1 to 2, it will be to the Arc on CA, as 1 to 4: And by the ſame reaſon, DR to the Arc on RS, and DT to the Arc on TV, muſt alſo be as 1 to 4: And therefore the Arcs on TV, on RS, on CA; that is, 4 DT, 4 DR, 4 DC; will be in the ſame proportion to one another, as (their ſingles) DT, DR, DC: But theſe (by conſtruction) are in continual proportion; therefore thoſe Arcs alſo, as they ought to be. Indeed, if (by changing ſome one of the terms) you deſtroy (contrary to the Hypotheſis) the continual proportion of DT, DR, DC, you will deſtroy that of the Arcs alſo (which are ſtill proportional to theſe:) but ſo long as DT, DR, DC, be in *any* continual proportion

* See *Tab.* 1. *n.* V.

portion

portion (whether that by him assigned or any other) those will be in the same continual proportion with them. As if for DT, DR, DC, be taken Dt, Dr, DC, in any continual proportion (greater, less, or equal to his) the Arcs on *tu*, on *rs*, on CA, (extended) will be in the same continual proportion.

But (which is the common fault of Mr. *Hobs*'s Demonstration) if this Demonstration were good, it would serve as well for any proposition as that for which he brings it. For if, instead of $\frac{2}{5}$, he had said, $\frac{4}{9}$, $\frac{1}{2}$, $\frac{1}{100}$, or what else he pleased; the Demonstration had been just as good as now it is, without changing one syllable: That is, it will equally prove the proportion of the Semidiameter to the Quadrantal Arc, to be, *what you please*: As any may presently see, who doth but read over his Paper.

In his second Paper,

HE pretends to *confute a Theorem, which hath a long time passed for truth*; (and therefore doth no more concern Dr. *Wallis*, than other men.) And 'tis this, *The four sides of a Square being divided into any number of equal parts, for example, into* 100; *and streight lines drawn through the opposite points, which will divide the Squares into* 100 *lesser Squares: The received opinion* (saith he) *and which* Dr. Wallis *commonly useth, is, that the Root of those* 100, *namely* 10, *is the side of the whole Square.* Which to confute, he tells us, *The Root* 10 *is a number of Squares, whereof the whole contains* 100; *and therefore the Root of* 100 *Squares is* 10 *of those Squares, and not the side of any Square; because the side of a Square is not a Superficies, but a Line.*

For Ans. I say, that 'tis neither the opinion of Doctor *Wallis*, nor (that I know) of any other (so far is it from being a *Received Opinion*, which Master *Hobs* insinuates as such) that 10 is the Root of 100 *Squares* (For surely a *Bare Number* cannot be the side of a *Square Figure*:) Nor yet (as Master *Hobs* would have it) that 10 *Squares* is the Root of 100 *Squares*: But that 10 *Lengths* is the Root of 100 *Squares*. 'Tis true that the *Number* 10 is the Root of the *Number* 100, but not, of a 100 *Squares*: and, that 10 *Squares* is the Root (not of 100 *Squares*, but) of 100 *Squared Squares*: Like as 10 *Dousen* is the Root, not of 100 *Dousen*, but of 100 *Dousen dousen*, or *Squares of a Dousen*. And, as, there,

there, you must multiply not only 10 *into* 10, but *Dousen into Dousen*, to have the Square of 10 *Dousen*; so here 10 *into* 10 (which makes a 100) and *Length into Length* (which makes a *Square*) to obtain the Square of 10 *Lengths*, which is therefore 100 *Squares*, and 10 *Lengths* the Root or side of it. But, says he, the Root of 100 *Soldiers*, is 10 *Soldiers*. *Answer*. No such matter: For 100 *Soldiers* is not the product of 10 *Soldiers into* 10 *Soldiers*, but of 10 *Soldiers into* the *Number* 10: And therefore neither 10, nor 10 *Soldiers*, the Root of it. So 10 *Lengths* into the *Number* 10, makes no Square, but 100 *Lengths*; but 10 *Lengths* into 10 *Lengths* makes (not 100 *Lengths*, but) 100 *Squares*.

So in all other proportions: As, if the number of *Lengths* in the *Square side* be 2; the number of *Squares* in the *Plain* will be *twice two*, (because there will be *two* rows of *two* in a row:) If the number of *Lengths* in the *side*, be 3; the number of *Squares* in the *Plain*, will be 3 times 3, or the Square of 3: If that be 4, this will be 4 times 4: And so in all other proportions. Of which, if any one doubt he may believe his own eyes *.

* See *Tab.* I. *n.* VI. VII. VIII. IX.

And this Mr. *Hobs* might have been taught by the next Carpenter (that knows but how to measure a Foot of Board) who could have told him, that because the *side* of a Square Foot, is 12 *Inches in* Length, the Plain of it will be 12 *times* 12 *Inches in Squares*: Because there will be 12 Rows of 12 in a Row.

His third Paper,

WHich came out just as the Answer to the two former was going to the Press, contains, for substance, the same with his second, and the Latter part of the first: And so needs no farther Answer.

Only I cannot but take notice of his usual trade of contradicting himself. His second Paper says, *The side of a Square is not a Superficies, but a* Line: His third says the quite contrary, (Prop. 1.) *A Square root, (speaking of Quantity) is not a* Line, *but a Rectangle.* Other faults, falsities, and contradictions, there are a great many.

As for Instance: He tells us first, *In the natural Row of Numbers*, as 1, 2, 3, 4, 5, 6, &c. *every one is the Square of some number in the same Row*; (that is, of some Integer number; which

which is notoriously false.) This he contradicts in the very next words, *But Square numbers (beginning at 1) intermit first two numbers, then four, then six, &c; so that none of the intermitted numbers is a Square number, nor hath any Square root.* (If these *intermitted numbers*, between 1, 4, 9, 16, &c. *be not Squares* how is it that *every one* in the whole row is a *Square*, and that of some Integer number?) But this again is contradicted *prop.* 2. where 200 (one of such intermitted numbers) is made a *Square*, and $14\frac{4}{14}$ the *Root* of it.

Again; in his *Definition* he tells us, that *a Square Root multiplied into it self produceth a Square:* But (*prop.* 2.) he multiplieth *the Root* $14\frac{4}{14}$ (not into it self, but) into 14 (a part thereof,) to make 200, which he will have to be *the Square* of that Root. Nor is it a meer slip of negligence in the computation, but his Rule directs to it; *Any number given is produced by the greatest Root multiplied into it self, and into the remaining Fraction.* Whereof he gives this instance: *Let the number given be* 200 *Squares, the greatest Root is* $14\frac{4}{14}$ *Squares* (he should rather have said *Lengths*; but that is a small fault with him;) *I say, that* 200 *is equal to the product of* 14 *into it self* (*which is* 196,) *together with* 14 *multiplied into* $\frac{4}{14}$ (*which is equal to* 4:) that is $14\frac{4}{14}$ multiplied into 14. But this calculation is again contradicted in his third proposition, where he calculates *the same Square* otherwise, as we shall see by and by. In the mean time let's consider this alone, and see the contradictions within it self. His Rule bids us multiply *the greatest Root into it self*, &c. This *greatest Root* he says is $14\frac{4}{14}$; yet doth he not multiply this, but 14 (a part thereof) *into it self and into the Fraction* $\frac{4}{14}$. Again; if $14\frac{4}{14}$ be *the greatest Root*, what shall be *the remaining Fraction*? Doth he take the Root of 200 to be more than $14\frac{4}{14}$ by some further *remaining Fraction*? If so, he should have told us what that Fraction is; for $\frac{4}{14}$ it is not, this being part of his *greatest Root* $14\frac{4}{14}$. But if we should allow (as I think we must,) that by *the greatest Root* he means sometimes $14\frac{4}{14}$, sometimes 14, (that is, if we allow him to contradict himself,) yet how comes he by the Fraction $\frac{4}{14}$? For, $\frac{2}{14}$ is too much (the square of $14\frac{2}{14}$ being more then 200, as by multiplying $14\frac{2}{14}$ into it self will appear;) which destroys his whole design; for 14, multiplied into $14\frac{2}{14}$, will not make 200, but 198; contrary to his rule. But further, it is so gross a mistake, to make 200 the Square of $14\frac{2}{14}$, that every Apprentice

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boy, (that can but multiply whole numbers, and fractions,) could have informed him better, who would firſt have reduced the fraction to ſmaller terms, putting $14\frac{2}{7}$ for $14\frac{4}{14}$, and then multiplying $14\frac{2}{7}$ into it ſelf, would have ſhew'd him, that the Square of $14\frac{4}{14}$, that is, $14\frac{4}{14}$ multiplied into it ſelf, is (not 200, but) $204\frac{4}{49}$.

But the Root of 200, is the ſaid number $10\sqrt{2}$, which is leſs than $14\frac{2}{14}$, and bigger than $14\frac{2}{15}$: the Square of that being ſomewhat more than 200; and, of this, ſomewhat leſs; but either of them within an unite of it.

$$\begin{array}{r} 14\frac{2}{7} \\ 14\frac{2}{7} \\ \hline 56 \\ 14 \\ 4 \\ 4 \\ \frac{4}{49} \\ \hline 204\frac{4}{49} \end{array}$$

But this ſecond Propoſition, is (as I ſaid) contradicted by his third, which makes the Square of $14\frac{4}{14}$ to be $200\frac{1}{49}$, (by what computation, we ſhall ſee by and by;) and then finds fault, that this and the former do not agree. (But 'tis no wonder they ſhould diſagree, when both are falſe.) *The ſame Square* (ſaith he) *calculated Geometrically, conſiſteth (by Euclid. 2.4.) of the ſame numeral great Square 196, and of two Rectangles under the greateſt ſide 14 and the Remainder of the ſide, and further of the Square of the leſs ſegment; which altogether make* $200\frac{1}{49}$. (He might have learned to reckon better; but let us ſee how he makes it out.) *As by the operation it ſelf* (ſaith he) *appeareth thus: The ſide of the greater ſegment is* $14\frac{4}{14}$ (this was, but now, the ſide of the whole ſquare, how comes it now to be but the ſide of the greater Segment?) *which multiplied unto it ſelf* (ſaith he) makes 200: (no; but $204\frac{4}{49}$:) *The product of 14 the greateſt Segment into the two Fractions* $\frac{4}{14}$ is 4, *and that added to 196 makes* 200: (if by two fractions $\frac{4}{14}$, he mean, as he ought by his Rule, the Fraction 4 twice taken, or the double of it, it will be not 4, but 8, and this added to 196 make 204; But all this he puts in his pocket, for it comes not into account at all.) *Laſtly, the product of* $\frac{2}{14}$ *into* $\frac{2}{14}$, *or* $\frac{1}{7}$ *into* $\frac{1}{7}$ *is* $\frac{1}{49}$; which with the firſt 200 makes $200\frac{1}{49}$: (But he forgets himſelf, for his leſſer ſegment was not $\frac{2}{14}$, but $\frac{4}{14}$; he ſhould therefore have ſaid $\frac{4}{14}$ into $\frac{4}{14}$, or $\frac{2}{7}$ *into* $\frac{2}{7}$, is $\frac{4}{49}$.) His calculation therefore ſhould have been this: The greater ſegment is (not $14\frac{4}{14}$, but) 14; which multiplied into it ſelf makes (not 200, but 196: The Rectangle of the greater ſegment 14, into the leſſer $\frac{4}{14}$, is 4: And this taken a ſecond time, is another 4: The leſſer ſegment (not $\frac{2}{14}$, but) $\frac{4}{14}$, or $\frac{2}{7}$, multiplied into it ſelf, is (not

(not $\frac{1}{49}$, but) $\frac{4}{49}$: All which added together make not $200\frac{1}{49}$, but $196 + 4 + 4 + \frac{4}{49} =$) $204\frac{4}{49}$, which is juſt the ſame with $14\frac{2}{14}$ multiplied into it ſelf. So that, had he known how to multiply a number into a number, eſpecially when incumbred with fractions (which it is manifeſt he doth not,) he would have found no diſagreement between the *Arithmetical calculation*, and what he calls the *Geometrical*. But I am aſhamed (for him) that ſo great a pretender to ſuch high things in Geometry, ſhould be ſo miſerably ignorant of the common operations of practical Arithmetick.

His repeated Quadrature he now expreſſeth thus, *The Radius of a Circle is a mean Proportional between the Arc of a Quadrant and two fifths of the ſame.* But inſtead of *two fifths*, he might as well have ſaid the *half*, or *tenth*, or *hundredth part*, &c; or (taking T in DC produced beyond C,) the *double, decuple, centuple, &c.* or *what you pleaſe*: For his Demonſtration would have proved it, which is this. *Deſcribe a Square ABCD, and in it a Quadrant DCA. In the ſide DC* (continued if need be,) *take DT two fifths of DC*, (or its Half, Double, Hundredth part, or what you pleaſe;) *and between DC and DT a mean proportional DR; and deſcribe the Quadrantal Arcs RS, TV. I ſay, the Arc RS is equal to the ſtreight line DC. For ſeeing the proportion of DC to DT is duplicate of the proportion of DC to DR, it will be alſo duplicate of the Proportion of the Arc CA to the Arc RS, and likewiſe duplicate of the Proportion of the Arc RS to the Arc TV. Suppoſe ſome other Arc, leſs or greater than the Arc RS, to be equal to DC, as for example* rs; *Then the proprrtion of the Arc* rs *to the ſtreight line DT will be duplicate of the proportion of RS to TV, or DR to DT, which is abſurd; becauſe D*r *is by conſtruction greater or leſs than DR. Therefore the Arc RS is equal to the ſide DC; which was to be demonſtrated.* Which demonſtration therefore proving indifferently *every* proportion, doth not indeed prove *any*. In brief: The force of his Demonſtration is but this; *DT being to DC as* 2 *to* 5 (or in any other proportion) *and DR a mean proportional between them; RS will be ſo between TV and CA; and therefore* rs (*greater or leſs than RS*,) *will not be a mean proportional between TV and CA*: which is true; *but why it may not be equal to DC*, we have nothing but his word for it; there being nothing to ſhew, that *DC is equal to ſuch a mean proportional.* Again; though *rs* be not a mean proportional between TV and CA, yet it may be between *tv* and CA, which ſerves his Demonſtration as well;

 which

which is indifferent to any three continual proportionals, as was shewed before. So that now we have had three Demonstrations of this Quadrature, (in his *Rosetum*, in his *first* paper, and in his *third*,) and this common fault in all of them, that they equally prove the proportion by him proposed, or any other what you please. But such his Demonstrations use to be.

And this is what I thought fit to say to Mr. *Hobs's* ~~Four~~ Three *Papers* (rather to satisfie the importunity of others, than because I thought them worth Answering:) And submit the whole, with all Respects, to the *Royal Society*, to whom Mr. *Hobs* makes his Appeal.

His Fourth Paper;

WHich came out since the *Three former* were answer'd, (containing some faint endeavors to re-assert some things in them,) is but meer Trifling, or worse than so.

What he would therein insinuate concerning *God* (that we may as well prove *Him* to have had a Beginning, as that the World had) smells too rank of Mr. *Hobs*. We are not to measure Gods *Permanent* Duration of Eternity, by our *successive* Duration of Time: Nor, his Intire *Ubiquity*, by Corporeal *Extension*.

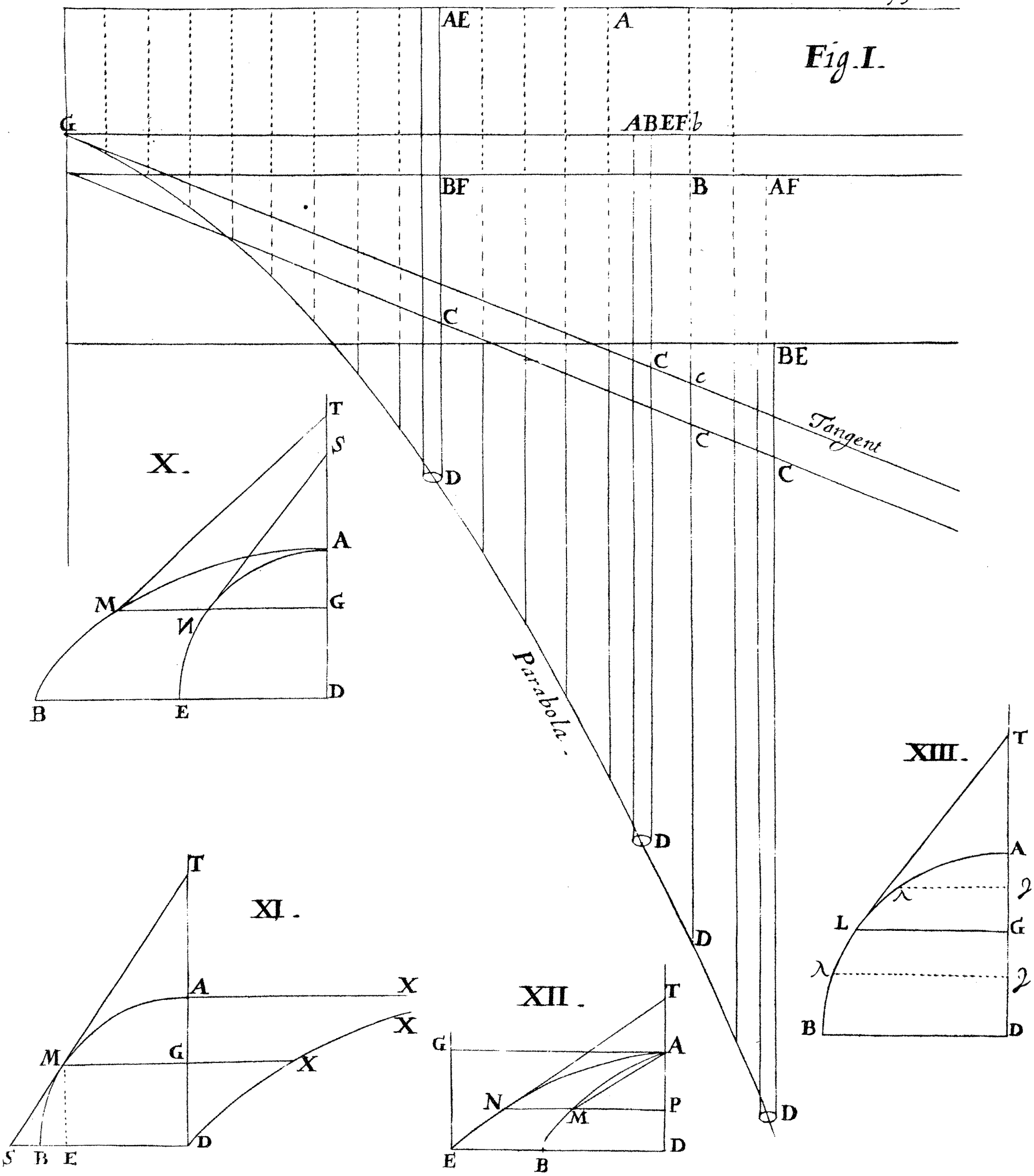
What in it concerns *Mathematicks*, (whether his own or others,) is so weak and trivial, (and said only, that he may seem to say something, though nothing to the purpose,) that I shall trust it with those to whom he makes his appeal, without thinking it to need any Reply; The view of what he writeth against, being a sufficient Answer to all he saith.

New Observations of Spots *in the* Sun; *made at the Royal Academy of* Paris, *the* 11, 12 *and* 13*th of* August 1671; *and English't out of the French, as follows.*

IT is now about twenty * years since, that Astronomers have not seen any considerable *Spots* in the Sun, though before that time, since the Invention of Telescopes, they have from time to time observed them. The Sun appeared all that while with an entire brightness, and Signor *Cassini* saw him so the *ninth* of this month of *August*.

* *See* Numb. 74. *p.* 2216; *whence it will appear, that some such Spots were seen here in* London, *A.* 1660. *And Mons.* Picard *affirm'd to Dr.* Fogelius *at* Hamburg, *that he had seen some in* October 1661. *witness the said* Doctor's *own Letter, written to the Publisher* August 11th *last.*

But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