

52 Philosophical Principles

(see the preceding Figures) be call'd x , KL , and $AI = IE$ be 1. Let n be an integer Number, then $y = x^{-n}$, expresses the Nature of an infinity of Hyperboloids, from this you have $x = \frac{1}{\sqrt[n]{y}}$ i.e. $GL = \frac{1}{\sqrt[n]{y}}$, which shews, that the greater you suppose n to be, the longer will the ordinate GL be, in respect of the same Absciss AG ; for Example, of two Curves $yx^2 = 1$, $yx^3 = 1$ (of which the former gives $GL = \frac{1}{\sqrt{y}}$, the other $GL = \frac{1}{\sqrt[3]{y}}$) that which has $n = 3$ (viz. $yx^3 = 1$) shall have a longer Ordinate, GL , than the former, which has $n = 2$. and consequently the point L in the first ($yx^2 = 1$) shall approach nearer to AC , than the point L in the second ($yx^3 = 1$) when you take AG the same in both; and therefore the greater you suppose n , the longer will it be, before the Curve LED meet with the Asymptote AC , but they all meet with AC , at an infinite Distance from A , viz. when GL is $= 0$,
- and

