terms. For all the functions thus developed can contain only those constituents which have the coefficient 1 or the coefficient 0 (and in the latter case, they do not contain them). Hence they are additive combinations of these constituents; and, since the number of the constituents is 2^n, the number of possible functions is 2^{2^n}. From this must be deducted the function in which all constituents are absent, which is identically 0, leaving $2^{2^n}-1$ possible equations (255 when $n = 3$). But these equations, in their turn, may be combined by logical addition, *i. e.*, by alternation; hence the number of their combinations is $2^{2^{2^n}-1}-1$, excepting always the null combination. This is the number of possible assertions affecting n terms. When $n = 2$, this number is as high as 32767.[1] We must observe that only universal premises are admitted in this calculus, as will be explained in the following section.

53. Particular Propositions.—Hitherto we have only considered propositions with an *affirmative* copula (*i. e.*, inclusions or equalities) corresponding to the *universal* propositions of classical logic.[2] It remains for us to study propositions with a *negative* copula (non inclusions or inequalities), which translate *particular* propositions[3]; but the calculus of

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1 G. PEANO, *Calcolo geometrico* (1888) p. x; SCHRÖDER, *Algebra der Logik*, Vol. II, p. 144—148.

2 The *universal affirmative*, "All a's are b's", may be expressed by the formulas

$$(a < b) = (a = ab) = (ab' = 0) = (a' + b = 1),$$

and the *universal negative*, "No a's are b's", by the formulas

$$(a < b') = (a = ab') = (ab = 0) = (a' + b' = 1).$$

3 For the *particular affirmative*, "Some a's are b's", being the negation of the universal negative, is expressed by the formulas

$$(a \not< b') = (a \neq ab') = (ab \neq 0) = (a' + b' \neq 1),$$

and the *particular negative*, "Some a's are not b's", being the negation of the universal affirmative, is expressed by the formulas

$$(a \not< b) = (a \neq ab) = (ab' \neq 0) = (a' + b \neq 1).$$