For if we transform the given inclusions into equalities, we shall have

$$abc + ab'c' = 0, \quad abc + a'bc' = 0, \quad abc + a'b'c = 0,$$

whence, by combining them into a single equality,

$$abc + ab'c' + a'bc' + a'b'c = 0.$$

Now this equality, as we see, is equivalent to any one of the three equalities to be demonstrated.

28. The Limits of a Function.—A term x is said to be *comprised* between two given terms, a and b, when it contains one and is contained in the other; that is to say, if we have, for instance,

$$a < x, \quad x < b,$$

which we may write more briefly as

$$a < x < b.$$

Such a formula is called a *double inclusion*. When the term x is variable and always comprised between two constant terms a and b, these terms are called the *limits* of x. The first (contained in x) is called *inferior limit*; the second (which contains x) is called the *superior limit*.

THEOREM.—*A developed function is comprised between the sum and the product of its coefficients.*

We shall first demonstrate this theorem for a function of one variable,

$$ax + bx'.$$

We have, on the one hand,

$$(ab < a) < (abx < ax),$$
$$(ab < b) < (abx' < bx').$$

Therefore

$$abx + abx' < ax + bx',$$

or

$$ab < ax + bx'.$$

On the other hand,

$$(a < a + b) < [ax < (a + b)x],$$
$$(b < a + b) < [bx' < (a + b)x'].$$