propositions having a negative copula results from laws already known, especially from the formulas of DE MORGAN and the law of contraposition. We shall enumerate the chief formulas derived from it.

The principle of composition gives rise to the following formulas:

$$(c \nless ab) = (c \nless a) + (c \nless b),$$
$$(a + b \nless c) = (a \nless c) + (b \nless c),$$

whence come the particular instances

$$(ab \neq 1) = (a \neq 1) + (b \neq 1),$$
$$(a + b \neq 0) = (a \neq 0) + (c \neq 0).$$

From these may be deduced the following important implications:

$$(a \neq 0) < (a + b \neq 0),$$
$$(a \neq 1) < (ab \neq 1).$$

From the principle of the syllogism, we deduce, by the law of transposition,

$$(a < b) \ (a \neq 0) < (b \neq 0),$$
$$(a < b) \ (b \neq 1) < (a \neq 1).$$

The formulas for transforming inclusions and equalities give corresponding formulas for the transformation of non-inclusions and inequalities,

$$(a \nless b) = (ab' \neq 0) \qquad = (a' + b \neq 1),$$
$$(a \neq b) = (ab' + a'b \neq 0) \quad = (ab + a'b' \neq 1).$$

54. Solution of an Inequation with One Unknown.— If we consider the conditional inequality (*inequation*) with one unknown

$$ax + bx' \neq 0,$$

we know that its first member is contained in the sum of its coefficients

$$ax + bx' < a + b.$$