

**Remark 3.7.** [228] In the definition [00G] we speak of atomic formulas, i.e. composed of a single variable; we want to reflect on this. In programming languages we may use names composed of several letters to identify objects (variables, functions, etc.): such as

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foo = 3 ;  
bar = 7 ;  
foo = foo + bar ;
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In mathematics this is unusual, since in a formula such as

$$xyz + abc$$

it would be difficult to understand if  $xyz$  is a variable, or the product of three variables  $x, y, z$ . For this reason, usually, in mathematics the identifiers are composed of a single letter; some notable functions are an exception, such as  $\sin, \cos, \exp, \log, \dots$  etc. However, this creates some problems when you want to express a formula where there are many variables; for this reason, letters from the Greek alphabet are also used, and even Hebrew, in particular "aleph"  $\aleph$  and "beth"  $\beth$ ; and the letters are also accompanied by indexes, subscript as  $x_1, x_2, x_3$  or superscript  $x^1, x^2, x^3$  (being careful not to be confused with the exponentiation); then there are variants expressed with the signs  $\hat{x}, \bar{x}, \tilde{x}, x'$  (being careful not to get confused with derivatives); and there are choices of fonts, such as "calligraphic"  $\mathcal{A}, \mathcal{B}, \mathcal{C}, \mathcal{D}, \dots$ , the "fraktur"  $\mathfrak{a}, \mathfrak{b}, \mathfrak{c}, \mathfrak{d} \dots \mathfrak{A}, \mathfrak{B}, \mathfrak{C}, \mathfrak{D}$  or the blackboard bold  $\mathbb{a}, \mathbb{b}, \mathbb{c}, \mathbb{d} \dots \mathbb{A}, \mathbb{B}, \mathbb{C}, \mathbb{D}$ .