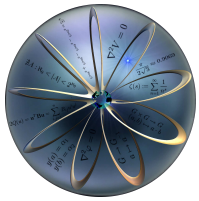

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indeterminate

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An *indeterminate* is simply a variable that is not known or solvable. It is usually denoted by a mathematical alphabet (x, y, z, or α, β, etc...). It is important to distinguish between a variable and an indeterminate in that a variable is solvable, at least conditionally. To make this more precise, let's see two examples:

1. Let x be a variable such that $2 + 3x = a + bx$, where $a, b \in \mathbb{Q}$. Then $x = (a - 2)/(3 - b)$. Here x is solvable conditioned on the equation given. Any values of a and $b\,(\neq 3)$ will yield a value for x.

2. Let x be an indeterminate such that $2 + 3x = a + bx$, where a, $b \in \mathbb{Q}$. Since x can not be solved, we have $2 = a$ and $3 = b$. Note that if a and b are previously assigned to be values other than 2 and 3 respectively, then x is no longer an indeterminate.