

# Analytic expression

[@wikipedia](#)

**Synonym:** [Analytic expression](#) = [Explicit expression](#)

[Mathematical expression](#) expressed using a [finite](#) number of [basic arithmetic operations](#) over the numbers, [elementary functions](#) or tabulated [special functions](#) and may include [infinite series](#) and [continued fractions](#).

The key difference with [closed-form expression](#) is that [analytic expression](#) may include tabulated [special functions](#), [infinite series](#) and [continued fractions](#).

The key benefit of dealing with [closed-form expressions](#) is that they are:

- well tabulated with precision enough for the majority of engineering applications
- implemented as fast-computable algorithms with computer precisions (usually 64 bit and 128 bit) on modern computers
- available as fast-computing algorithms with arbitrary user-defined precision

## See also

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[Formal science](#) / [Mathematics](#) / [Calculus](#) / [Mathematical expression](#)

[ [Quadrature](#) ] [ [Implicit expression](#) ] [ [Analytic expression](#) ] [ [Closed-form expression](#) ]