Elementary Functions Encyclopedia Article

Elementary Functions

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Elementary Functions

Simple algebraic relationships that involve only two variables such as x and y are called elementary **functions**. In general, these can be denoted as y=f(x), where f symbolizes constants and operators on x. Basic examples of such a function would be y=2x or y=5x+1. It can be seen that these are easily evaluated given a value for x or y. that use a function of x as an are also considered to be elementary functions. These take the form $y=e^{f(x)}$ where f(x) is composed of the same type of constants and operations upon x as before. Again, knowing a value for x or y allows a solution to the to be determined. In addition, the inverse of **exponential functions**, the logarithmic functions, are included. Since can be expressed as **equations** that include exponential functions and their inverse, such as $2\cos x=e^{ix}+e^{-ix}$, the **trigonometric functions** must also be included as elementary functions. Any combinations of the above functions, complex as those combinations might seem are still elementary functions.

The of an elementary function is always an elementary function, but the inverse is not always true. Not all elementary functions can be obtained by derivation. Some examples of non-elementary functions include the, the and others.