



planetmath.org

Math for the people, by the people.

scientific calculator

Canonical name	ScientificCalculator
Date of creation	2013-03-22 16:39:19
Last modified on	2013-03-22 16:39:19
Owner	PrimeFan (13766)
Last modified by	PrimeFan (13766)
Numerical id	5
Author	PrimeFan (13766)
Entry type	Definition
Classification	msc 01A65
Classification	msc 00A05

A *scientific calculator* is a calculator with all the arithmetic capabilities of a basic calculator plus trigonometric, statistical, logarithmic, binary logic, etc. which are useful in various scientific applications. A typical scientific calculator has some forty to fifty keys and is capable of performing about twice as many operations than that (necessitating a “Shift” or “2nd” key). They are often capable of displaying results in binary, octal and hexadecimal, but are usually limited to integers in those bases.

The calculator trigonometric functions are sin, cos, and tan, which have their own keys. The arc versions of these are usually obtainable by using the “Shift” or “2nd” key.

A scientific calculator may have a single memory register with the associated keys M+, MR and MC, but they often have several more registers to hold various values for use in statistical computations.

For values greater than about 10^{12} or smaller than 10^{-12} (slightly more or less depending on the model) hardware scientific calculators must switch to scientific notation.