

Report:

**Scientific Calculator**

**Prepared by**

**Manjula Sivanarayana**

**09-02-2022**

**LTTS**

**Description of Project:**

By definition, a scientific calculator is a calculator designed to help you calculate science, engineering, and mathematics problems. It has way more buttons than your standard calculator that just lets you do your four basic arithmetic operations of addition, subtraction, multiplication, and division.

**Research Objectives:**

* Modern scientific calculators generally have many more features than a standard four or five-function calculator, and the feature set differs between manufacturers and models; however, the defining features of a scientific calculator include:
* scientific notation,
* floating-point arithmetic
* logarithmic functions, using both base 10 and base e
* trigonometric functions (some including hyperbolic trigonometry)
* exponential functions and roots beyond the square root
* quick access to constants such as pi and e
* In addition, high-end scientific calculators generally include:
* cursor controls to edit equations and view previous calculations
* hexadecimal, binary, and octal calculations, including basic Boolean math
* complex numbers
* fractions calculations
* statistics and probability calculations
* programmability — see Programmable calculator
* equation solving
* matrix calculations
* calculus
* letters that can be used for spelling words or including variables into an equation
* conversion of units
* physical constants

**Conclusion:**

A scientific calculator is a type of electronic calculator, usually but not always handheld, designed to calculate problems in science, engineering, and mathematics. They have completely replaced slide rules in traditional applications, and are widely used in both education and professional settings.

In certain contexts such as higher education, scientific calculators have been superseded by graphing calculators, which offer a superset of scientific calculator functionality along with the ability to graph input data and write and store programs for the device. There is also some overlap with the financial calculator market.