Calculators in the Classroom

Supporting options for scientific calculators

SUPPORT CLASSROOM with TECHNOLOGY

Data Analysis System

Quick and accurate collection supports data analysis.

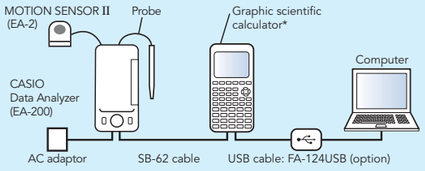
EA-200

- Collect data at rates of up to 50,000 points per second for up to 120,000 points.
- Compatible with the CASIO fx-7400 series, CFX-9850 series, ALGEBRA FX 2.0 series, fx-9860G series, fx-9750G series and ClassPad series.

Includes:
- CASIO Data Analyzer
- Temperature probe
- Optical probe
- Voltage probe
- Data communication cable: SB-62
- AC adaptor: AD-A60024
- Soft case
- Four AA-size alkaline batteries

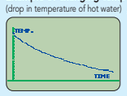
* Data trasfer to Classpad series is possible only via main 3-pin port, not via sub ports.

System Configuration



Example of changing temperature data over time

(drop in temperature of hot water)



* ClassPad 330/fx-9860GII SD/fx-9860GII/fx-9860G Slim/fx-9860G SD/fx-9860G/fx-9750GII/ClassPad 300 PLUS/ClassPad 300/ALGEBRA FX 2.0 PLUS/FX 1.0 PLUS/ALGEBRA FX 2.0/FX 1.0/CFX-9850GB PLUS/CFX-9850GC PLUS/CFX-9950GB PLUS/fx-9750G/fx-9750G PLUS/fx-9750GA PLUS/fx-7450G/fx-7400G PLUS/fx-7400GII/RM-ALGEBRA FX 2.0/RM-ClassPad PLUS/RM-7000/RM-9000/RM-9850Ga PLUS/OH-ClassPad 330/OH-ALGEBRA FX2.0/OH-9000/VI-9850Ga PLUS/VI-9850GB PLUS

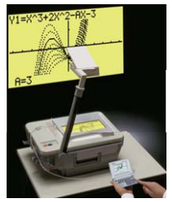
MOTION SENSOR II

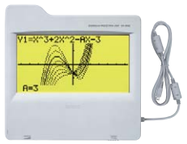
EA-2

*Supplies extremely limited

The EA-2 emits ultrasonic pulses and detects pulses returned as echoes from the target. It can be connected to the CASIO EA-200 Data Analyzer to accumulate and analyze data.

OHP Projection Unit





OH-9860

Makes lessons more interesting

Simply use a USB cable to connect an fx-9860GII SD, fx-9860GII, fx-9750GII or fx-9860G Slim calculator to the OH-9860 to project the contents of the calculator display.
This option lets students or teachers connect and project for classroom presentations. All of this makes class activities more interesting and challenging, and improves student learning and understanding.

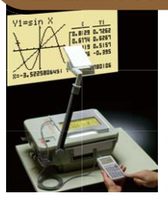
A powerful classroom presentation tool! OHP projects display contents onto a big screen!

OH-300ES PLUS
OH-300ES OH-300MS

- OH-300ES PLUS provides the same powerful functions as the fx-82ES PLUS/85ES PLUS/350ES PLUS.
- OH-300ES provides the same powerful functions as the fx-82ES/85ES/350ES.
- OH-300MS provides the same powerful functions as the fx-82MS/85MS/350MS.

Simply place this transparent option onto an OHP to project its image and explain both screen contents and key operations.

Graphic Scientific Calculator Projection Set



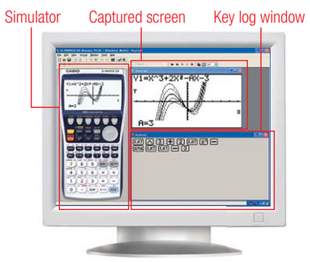
Simply place the supplied calculator onto an OHP unit to project screen contents onto a screen for easy viewing by everyone in the classroom. The calculator can be controlled remotely by a hand-held calculator.

All the functions of the ClassPad 330

OH-ClassPad 330 SET

Includes:
- Graphic scientific unit: OH-ClassPad 330 (same functions as ClassPad 330)
- Projection unit: OH-30
- Data transfer cable: SB-62
- PC-Link cable: USB
- Carrying bag

Software



■FA-9860A Ver. 2.0 fx-Manager PLUS (Single License)

■FA-9860B Ver. 2.0 fx-Manager PLUS (School License)

- fx-9860GII SD, fx-9860GII , fx-9750GII or fx-9860G Slim Calculator Emulation
  Mimics calculator operation using a computer mouse and keyboard.
- Copy and paste between the Spreadsheet application and Excel®
- Key-Log Editor Key-Log auto play of recorded key operations
  Step playback
- Emulator LCD screen capture • Screen Receiver

System Requirements

Operating System: Windows® 2000 Professional, Windows® XP Home Edition, Windows® XP Professional (32-bit), Windows Vista® (32-bit) , Windows® 7 (32-bit)
Others: Microsoft® Excel® 2000, Microsoft® Excel® 2003, or Microsoft® Excel® 2007

FA-124USB Data Communication Package

■ClassPad Manager for ClassPad 330 Ver. 3.0

- FA-CP330A Ver. 3.0 (Single License)
- FA-CP330B Ver. 3.0 (School License)
  - Laplace Transform/Fourier Transform
  - Geometry Application • Financial Function
  - Differential Equation Application • Spreadsheet Application
  - Data communication with ClassPad 330 series calculators

System Requirements

Computer: Recommended Intel® Pentium®III 500 MHz with USB
Operating Systems: Windows® 2000 Professional, Windows® XP Home Edition,Windows® XP Professional (32-bit), Windows Vista® (32-bit) ,Windows® 7 (32-bit)
Disk Space: 100 MB available for installation
Memory: Recommended for operating system

■fx-ES Emulator (for fx-82ES Series)

■fx-ES PLUS Emulator (for fx-82ES PLUS Series)

Easy emulator image resizing
Easy LCD window resizing
Easy captured LCD image resizing

- Emulation of fx-82ES Series and fx-82ES PLUS Series
  Emulation of fx-82ES Series and fx-82ES PLUS Series calculator operation using your computer mouse and keyboard.
- Emulator LCD screen image capture

System Requirements

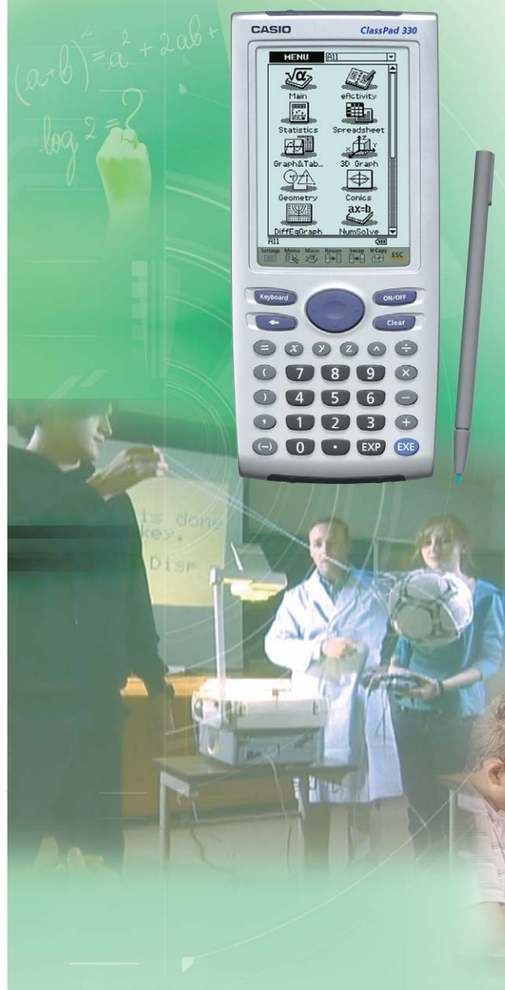
Operating Systems: Windows® 2000 Professional, Windows® XP Home Edition, Windows® XP Professional (32-bit), Windows Vista® (32-bit), Windows® 7 (32-bit)

Printed in Japan BS1011-010001A

CASIO®

SUPPORT CLASSROOM with TECHNOLOGY

SCIENTIFIC CALCULATORS



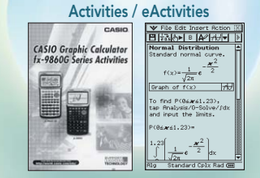
Support Your Classroom with Technology!

Scientific Calculators
Easy-to-use products developed for educational needs

Professional Development
Seminars for teachers on scientific calculator use for more attractive lessons

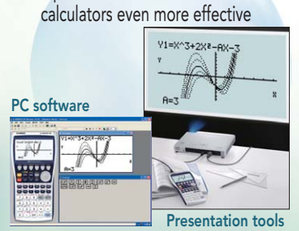
Classroom Activities
Paper-backup teaching materials and digital worksheets to help students understand better

Activities / eActivities



Optional Tools
Optional tools that make scientific calculators even more effective

PC software



Presentation tools

CASIO Worldwide Education Website Full classroom support with technology

http://edu.casio.com

Graphic Models and Programmable Models

Supports advanced research and study with powerful built-in graph and program functions.

Graphic Models

User-friendly Interface

- Large display (160 × 240 dots)
- Natural input and output
- Pen touch operation
- eActivity application
- 3D Graph application
- Differential Equation application
- Advanced CAS
- Financial application
- Improved Spreadsheet application
- Geometry application
- Statistics
- Comes with snap-on hard case
- USB cable for connecting with PC
- 3-pin cable for connecting with other ClassPad unit or EA-200

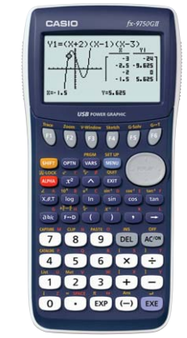
ClassPad 330

over 1,500 FUNCTIONS | 515,000 bytes | NATURAL TEXTBOOK | List-based STAT | Multi-replay | 21 characters by 17 lines | 10+3 DIGITS | ICON MENU | DOT MATRIX | Plastic Keys

- Large display (128 × 64 dots)
- Algebra Applications (Computer Algebra System, Algebra, Tutor) • Graphic functions and Graph solve functions • Dynamic graph
- Dual graph (Graph and Table, Graph and Graph)
- Conic section graph • Complex functions
- List function and list-based statistics
- Statistic calculations and graphs
- Graph solve • Integrations
- Differential and quadratic differential calculations
- BASIC-like program functions
- Linear equations from 2 to 30 unknowns
- 2 to 30 order equations
- Matrix operations with complex numbers
- Base-*n* calculations/conversions
- Add-in application with Flash Memory
- Includes a connecting cable for data transfer between two units
- Data communication (requires optional FA-124USB for connecting with PC)
- Comes with slide-on hard case

ALGEBRA FX 2.0 PLUS

over 1,500 FUNCTIONS | 146,000 bytes | 768KB Flash Memory | List-based STAT | 21 characters by 8 lines | 10 digits 10+2 digits | ICON MENU | DOT MATRIX



POWER GRAPHIC

- Large display (128 × 64 dots)
- Graphic functions • Dynamic graph
- Dual graph • Conic section graph
- Regression graph • Graph solve
- Integrations • Differential and quadratic differential calculations
- Complex number calculations
- Table and graph • Recursion graph
- List-based statistics • Advanced statistics
- BASIC-like program functions
- Linear equations from two to six unknowns
- Quadratic equations, Cubic equations
- Matrix operations
- Base-*n* calculations/conversions
- Financial function
- Data communications
- Ready-to-use USB functions
- Comes with slide-on hard case

fx-9750GII

over 2,800 FUNCTIONS | 62,000 bytes | List-based STAT | Multi-replay | 21 characters by 8 lines | 10+2 DIGITS | ICON MENU | DOT MATRIX | Plastic Keys

fx-9860G Slim

over 1,000 FUNCTIONS | 63,000 bytes | NATURAL TEXTBOOK | List-based STAT | Multi-replay | 21 characters by 8 lines | 10+2 DIGITS | ICON MENU | DOT MATRIX | Plastic Keys

*fx-9860GII SD** *fx-9860GII*

* SD memory card not included

over 2,900 FUNCTIONS | 62,000 bytes | NATURAL V.P.A.M | List-based STAT | Multi-replay | 21 characters by 8 lines | 10+2 DIGITS | ICON MENU | DOT MATRIX | Plastic Keys | SD CARD*

**fx-9860GII SD model only.*

User-friendly Interface

- Backlight • Large display (128 × 64 dots)
- Natural textbook display Input/ Output (fx-9860GII SD/9860GII)
- Graphic functions • Dynamic graph • Dual graph
- Conic section graph • Regression graph • Graph solve
- Integrations • Differential and quadratic differential calculations
- Complex number calculations • Table and graph
- Recursion graph • List-based statistics
- Advanced statistics • BASIC-like program functions
- Linear equations from two to six unknowns
- Quadratic equations, Cubic equations • Matrix operations
- Base-*n* calculations/conversions • Financial function
- High-resolution LCD • High-speed CPU
- Large-capacity 1.5MB Flash Memory • Spreadsheet
- eActivity • Add-in software • Ready-to-use USB functions
- Data communications
- Comes with slide-on hard case (fx-9860GII SD/9860GII)

fx-9860G Slim
- Natural textbook display (Input only)
- Help and on-screen guidance

NEW

fx-7400GII

over 2,100 FUNCTIONS | 20,000 bytes | List-based STAT | Multi-replay | 21 characters by 8 lines | 10+2 DIGITS | ICON MENU | DOT MATRIX | Plastic Keys

POWER GRAPHIC

- High-definition display (64×128 dots)
- Inequality Graphing • Polar Graph
- *X*= Graph • Graph Solve Function (Root, Intersection) • Sketch (Tangent)
- Bar Graph/Pie Chart • Random Number Function • Quotient, Remainder
- String Functions • Unit Conversion
- Solve Calculations (EQUA mode)
- GCD/LCM • 12 Types of Regression
- Complex Calculations • Catalog Function • Polynomial Function (EQUA mode) • Simultaneous Functions (EQUA mode) • Base-*n* Calculation • Display Language Setting • Data communication (requires optional 3-pin cable, FA-124 USB for connecting with PC)
- Comes with slide-on hard case

Programmable Models

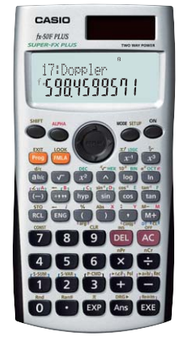
Natural Textbook Display and MORE POWERFUL Program Functions

- Program function • Matrix calculations
- Differential and integration
- Recursions • Solve function
- Complex number calculations
- Base-*n* calculations
- Data transmission between two fx-5800P calculators
- 26 to 2398 variables
- Fraction calculations
- 40 scientific constants
- 128 built-in formulas
- Multi-replay function
- Statistics (List-based Statistics, Standard deviation, Regression analysis)
- Integrated hard case swings back a full 360 degrees.

664 FUNCTIONS | 28,500 bytes | NATURAL TEXTBOOK | List-based STAT | Multi-replay | 10+2 DIGITS | DOT MATRIX | Plastic Keys

SUPER-FX PLUS
fx-5800P

BASIC-like Program, Perfect Algebraic Method, 2-line Display, Multi-replay Function

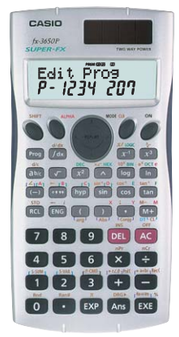


- Program function
- Multi-replay function
- 2-line display
- Fraction calculations
- Combination and permutation
- 23 built-in formulas
- 40 scientific constants
- Statistics (STAT-data editor, Standard deviation, Regression analysis)
- 7 variables
- Plastic keys
- Comes with slide-on hard case

406 FUNCTIONS | STAT-data | Multi-replay | 2-LINE DISPLAY | 10+2 DIGITS | DOT MATRIX | TWO WAY POWER | Plastic Keys

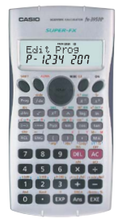
SUPER-FX PLUS
fx-50F PLUS

Two-way power



Multi-replay Function, 2-line Display, Perfect Algebraic Method

Button-type battery



- Program function
- Multi-replay function
- 2-line display
- Fraction calculations
- Combination and permutation
- Differential and integration
- Statistics (STAT-data editor, Standard deviation, Regression analysis)
- Base-*n* calculations/conversions
- Logical operations
- Complex number calculations
- 7 variables
- Plastic keys
- Comes with snap-on hard case

279 FUNCTIONS | STAT-data | Multi-replay | 2-LINE DISPLAY | 10+2 DIGITS | DOT MATRIX | Plastic Keys

SUPER-FX
fx-3650P

SUPER-FX
fx-3950P

2-line Display and Program File System

- 2-line display shows formulas and results simultaneously.
- Versatile program area management: up to 1,103 program steps, and 26 (standard) to 163 variables
- Program file system for storing multiple programs
- Replay function
- Engineering symbol calculations
- Formula memory
- Integrations
- Statistics (Standard deviation, Regression analysis)
- Base-*n* calculations/conversions
- Logical operations

242 FUNCTIONS | 2-LINE BIG DISPLAY | 10+2 DIGITS | DOT MATRIX | Plastic Keys

fx-4500PA

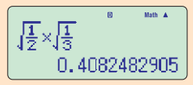
Standard Models

Simplifies high-level calculations. Essential calculators for research institutions and schools.

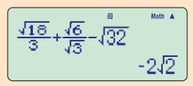
Natural-V.P.A.M. models

NATURAL-V.P.A.M. models

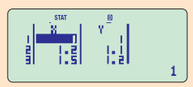
CASIO's original "Natural Expression Input Display" and "Natural Expression Output Display" make it possible to display fractions, exponents, logarithms, powers, and square roots just as they are written in the textbook. The result is enhanced student comprehension and improved math class efficiency.



Natural input
Input expressions and arithmetic operations as they appear in written form.

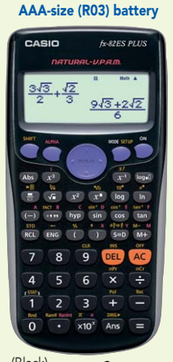


Natural output
Calculation results appear in the same format as they are written.



Full dot display
Equations and statistical data is displayed in a clear, easy-to-read format.

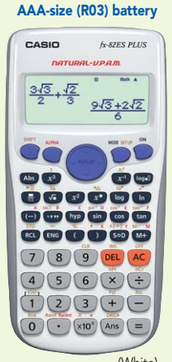
AAA-size (R03) battery



(Black)

fx-82ES PLUS

AAA-size (R03) battery



(White)

fx-82ES PLUS

New functions:
- Prime Factorization • Random Integers

- Fraction calculations • Combination and permutation
- Statistics (List-based STAT data editor, standard deviation, regression analysis)
- 9 variables • Table function
- Comes with new slide-on hard case

252 FUNCTIONS | NATURAL V.P.A.M. | List-based STAT | Multi-replay | 10+2 DIGITS | DOT MATRIX | Plastic Keys

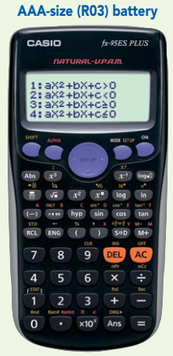
Two-way power

fx-85ES PLUS

AAA-size (LR03) battery

fx-350ES PLUS

AAA-size (R03) battery



fx-95ES PLUS

New functions:
- Prime Factorization • Ratio Calculation
- New Equation mode • Inequality
- Random Integers

fx-82ES PLUS/85ES PLUS/350ES PLUS functions, in addition to:
- Equation calculations

272 FUNCTIONS | NATURAL V.P.A.M. | List-based STAT | Multi-replay | 10+2 DIGITS | DOT MATRIX | Plastic Keys

Two-way power

fx-991ES PLUS

AAA-size (R03) battery

fx-570ES PLUS

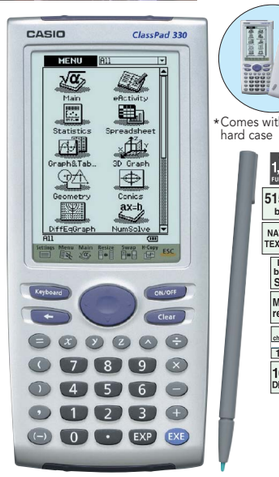
New functions:
- New Equation mode • Random Integers

fx-82ES PLUS/85ES PLUS/350ES PLUS functions, in addition to:
- Equation calculations • Integration/differential calculations
- Matrix calculations • Vector calculations • Complex number calculations
- CALC function • SOLVE function • Base-*n* calculation

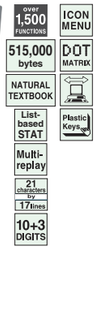
417 FUNCTIONS | NATURAL V.P.A.M. | List-based STAT | Multi-replay | 10+2 DIGITS | DOT MATRIX | Plastic Keys

Scientific Calculators

Graphic Models with CAS Capability



*Comes with snap-on hard case



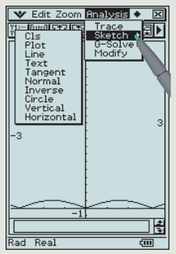
over 1,500 FUNCTIONS
515,000 bytes
NATURAL TEXTBOOK
List-based STAT
Multi-replay
21 characters by 17 lines
10+3 DIGITS
ICON MENU
DOT MATRIX
Plastic Keys

ClassPad 330

User-friendly Interface

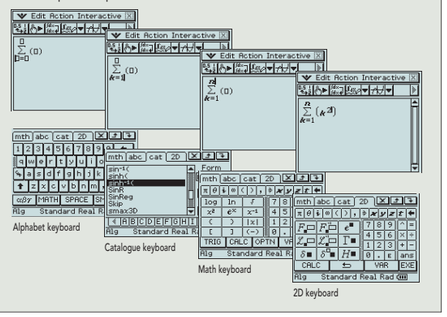
Pen Touch Operation

Intuitive stylus operation for entry of values and expressions, selection of menu commands, drag-and-drop copying of values and expressions, and much more. A big 160 × 240-dot LCD simplifies operation and shows more data per screen.



Natural Textbook Input and Output

Fractions, powers, and square roots, as well as high-level mathematical expressions such as log, Σ, $\int$, d/dx, lim, matrices, F (Fourier transforms), and L (Laplace transforms) can be entered and displayed just as they appear in your textbook. An on-screen soft keyboard helps to simplify entry of complex expressions.



ClassPad 330 Built-in Applications

Advanced CAS (Computer Algebra System)

Base-n capabilities have been added for general-purpose numerical and mathematical calculations. Natural input/output mathematical functions have been expanded to include F (Fourier transforms), L (Laplace transforms), δ, Γ, H, and more.

Differential Equation Application

The solution set of a differential equation can be represented graphically as a vector field, and solution curves can be drawn by providing initial conditions for the equation. First, second, and n-th order differential equations are supported.

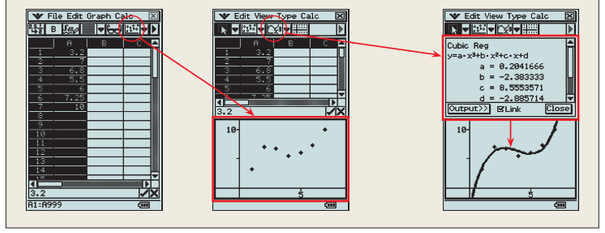
Financial Application

This ClassPad 330 application provides you with a total of 15 different financial calculations, including simple/compound interest, cash flow, amortization, depreciation, bond calculation, operating/financial leverage, and more.

Spreadsheet Application

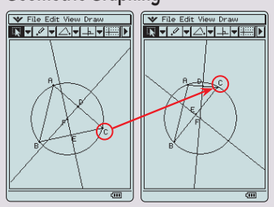
Improved Spreadsheet Application

Collected data can be organized and tabulated for analysis after statistical graphing is complete. Spreadsheet data also can be used in table calculations. In addition, ClassPad 330 adds the following functions: search, sort, data import from and export to lists, matrices, and variables, CellIf, and Histogram/Box-whisker graphing.



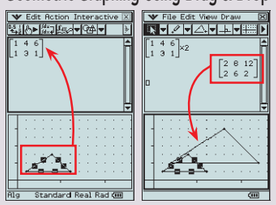
Geometry Application

Geometric Graphing



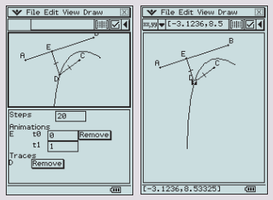
Students can learn the general theorems by drawing figures, and can confirm that a theorem still holds true even when the form of the triangle is altered.

Geometric Graphing Using Drag & Drop



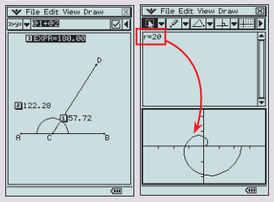
Dropping a geometric figure into the Main application window will produce the numerical data for the figure. Conversely, dropping numerical data into the Geometry window will produce the applicable figure.

Animation



An Animation function provides the means to move geometric figures drawn on the screen. You can even plot the locus for a particular point of the animation. The screenshot shows an example where Point D is plotted as the locus for Point E moving on Line AB.

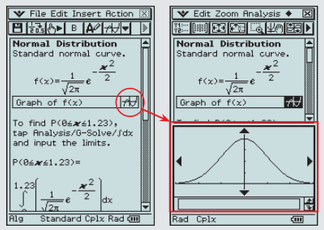
Enhanced Geometric Functions



ClassPad 330 supports drawing of conics using a focus, as well as graphing of polar equations and parametric equations. Enhanced labeling capabilities let you display attached angles, measurement-based calculation results, and more.

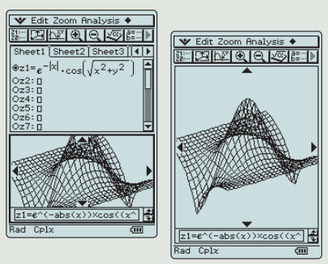
eActivity Application

An eActivity is like a digital worksheet that can be created and worked with on the ClassPad 330. All of the powerful features and capabilities of the ClassPad 330 can be incorporated into an eActivity. In addition to being able to perform the same calculations as the Main application, an eActivity will accept text entry, just like a word processor. Graphs, as well as Geometry and Spreadsheet data also can be stored in an eActivity file.



3D Graph Application

The 3D Graph Application lets you draw rectangular coordinate graphs ($z = f(x, y)$) and parametric function graphs ($xst = f(s, t)$, $yst = f(s, t)$, $zst = f(s, t)$). You can split the display screen between a 3D Graph Editor window and 3D Graph window, or enlarge the 3D Graph window to view a larger graph.



Graphic Models with Flash Memory

fx-9860GII SD

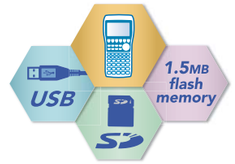
• SD memory card not included

fx-9860GII

over 2,900 FUNCTIONS
62,000 bytes
NATURAL V.P.A.M
List-based STAT
Multi-replay
21 characters by 8 lines
10+2 DIGITS
ICON MENU
DOT MATRIX
Plastic Keys
SD CARD

*SD model only.

With Natural-V.P.A.M. and backlit display.
The next-generation graphic scientific calculator.

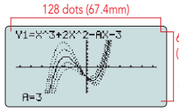


*Comes with slide-on hard case

Hardware Features

High-resolution LCD

The large 64 × 128-dot display of the fx-9860GII Series high-resolution LCD produces formulas, graphs and graphics that are sharper, clearer, and easier to read.



fx-9860GII series
Large 64 × 128 dot display.

Backlight on

High-speed CPU

A high-performance, high-speed CPU gives fx-9860GII Series calculators processing speeds that are three to five time faster than other brand calculators in their class. Processes and plots encountered in complex calculations and graphics are handled with ease, for enhanced operational efficiency and learning as well.

SD Memory Card Slot (SD model only)

The fx-9860GII SD is equipped with an SD memory card slot for easy data transfers.

Large-capacity 1.5MB Flash Memory

An ample 1.5MB of Flash Memory capacity allows worry-free downloading and storage of data and applications.

Out-of-the-box USB Operations

A USB cable, unit-to-unit cable and Program-Link Software all are included with the calculator, so high-speed data communication with a computer as well as unit-to-unit data and program transfers can be performed virtually out of the box.

Other Features

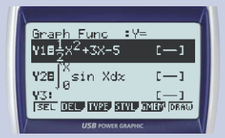
- Probability
- List-based Statistics
- Advanced Statistics
- Inequality Graphing
- Financial Calculations

Software Features

NATURAL-V.P.A.M.

Natural textbook display!

CASIO's original "Natural Expression Input Display" and "Natural Expression Output Display" make it possible to display fractions, exponents, logarithms, powers, and square roots just as they are written in the textbook. The result is enhanced student comprehension and improved math class efficiency.



■ Natural Input
Natural Input now supported in the Graph Mode!

■ Natural Output

Polynomial equation result

Natural Display Format

Also supports display of decimal values.

Result of expression with Pi symbol

Natural Display Format

eActivity

fx-9860GII Series calculators come with the same eActivity capabilities that originally appeared on the ClassPad 330. Now teachers as well as students can create their own problems and study materials. Students get the opportunity to learn at their own pace for more efficient study both at school and at home. eActivity is a great motivator for learning and understanding.

Built-in Software

Spreadsheet

A multi-function spreadsheet with built-in graphing capabilities is a valuable tool for table calculation lesson exercises.

E-CON2

E-CON2 provides total control over the optional EA-200 Data Analyzer.
It makes it possible to measure changes in temperature, sound, or speed using the EA-200 without any troublesome settings or program input.

Peripherals

Add-in software

Pre-installed Software ●Geometry Downloadable Software ●Physium

Add-in software can be downloaded from the CASIO website. http://edu.casio.com/dl/

Natural Display models

AAA-size (R03) battery

fx-82ES

- Fraction calculations • Combination and permutation
- Statistics (List-based STAT data editor, standard deviation, regression analysis) • 7 variables • Table function
- Comes with new slide-on hard case

249 FUNCTIONS | NATURAL TEXTBOOK | List-based STAT | Multi-replay | 10+2 DIGITS | DOT MATRIX | Plastic Keys

Two-way power

AAA-size (LR03) Alkaline battery

fx-85ES *fx-350ES*

AAA-size (R03) battery

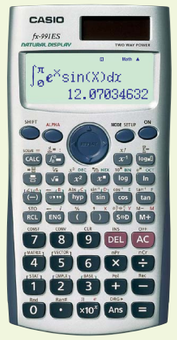
fx-500ES

fx-82ES/85ES/350ES functions, in addition to:

- Equation calculations

253 FUNCTIONS | NATURAL TEXTBOOK | List-based STAT | Multi-replay | 10+2 DIGITS | DOT MATRIX | Plastic Keys

Two-way power



fx-991ES

AAA-size (R03) battery

fx-570ES

fx-82ES/85ES/350ES functions, in addition to:

- Equation calculations • Integration/differential calculations
- Matrix calculations • Vector calculations • Complex number calculations • CALC function • SOLVE function
- Base-*n* calculation

403 FUNCTIONS | NATURAL TEXTBOOK | List-based STAT | Multi-replay | 10+2 DIGITS | DOT MATRIX | Plastic Keys

S-V.P.A.M. models

AA-size battery

- Fraction calculations
- Combination and permutation
- Statistics (STAT-data editor, Standard deviation, Regression analysis)
- 9 variables
- Comes with slide-on hard case

fx-82MS

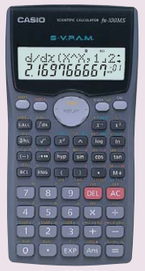
240 FUNCTIONS | S-V.P.A.M. | STAT-data | Multi-replay | 2-LINE DISPLAY | 10+2 DIGITS | DOT MATRIX | Plastic Keys

Two-way power

Button-type battery

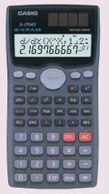
fx-85MS *fx-350MS*

AA-size battery



fx-100MS

Two-way power



fx-115MS

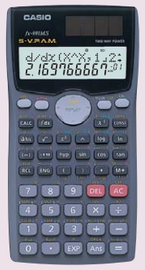
fx-82MS/85MS/350MS functions, in addition to:

- Equation calculations
- Integration/differential calculations
- Base-*n* calculations/conversions
- Complex number calculations

fx-100MS
fx-115MS

300 FUNCTIONS | S-V.P.A.M. | STAT-data | Multi-replay | 2-LINE DISPLAY | 10+2 DIGITS | DOT MATRIX | Plastic Keys

Two-way power



fx-991MS

Button-type battery

fx-570MS

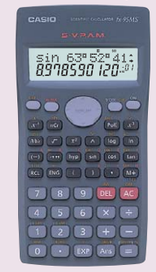
fx-82MS/85MS/350MS functions, in addition to:

- Equation calculations
- Integration/differential calculations
- Base-*n* calculations/conversions
- Complex number calculations
- Matrix calculations
- Vector calculations
- 40 scientific constants

fx-991MS
fx-570MS

401 FUNCTIONS | S-V.P.A.M. | STAT-data | Multi-replay | 2-LINE DISPLAY | 10+2 DIGITS | DOT MATRIX | Plastic Keys

AA-size battery



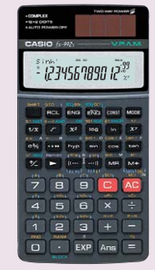
fx-82MS/85MS/350MS functions, in addition to:

- Equation calculations

fx-95MS

244 FUNCTIONS | S-V.P.A.M. | STAT-data | Multi-replay | 2-LINE DISPLAY | 10+2 DIGITS | DOT MATRIX | Plastic Keys

Two-way power



Built-in complex number calculations plus 128 scientific constants

- Statistical calculations
- Engineering symbol calculations
- Base-*n* calculations/conversions
- Comes with slide-on hard case

fx-992s

383 FUNCTIONS | V.P.A.M. | 12+2 DIGITS

Scientific Calculators Specification Table

		ClassPad 330	ALGEBRA FX 2.0 PLUS	fx-9860GII SD	fx-9860GII	fx-9860G Slim	fx-9750GII	fx-7400GII	fx-5800P	fx-50F PLUS	fx-3650P fx-3950P	fx-4500PA	fx-82ES PLUS fx-85ES PLUS fx-350ES PLUS	fx-95ES PLUS	fx-991ES PLUS fx-570ES PLUS	fx-82ES fx-85ES fx-350ES	fx-500ES	fx-991ES fx-570ES	fx-82MS fx-85MS fx-350MS	fx-100MS fx-115MS	fx-95MS	fx-991MS fx-570MS	fx-992S
Specifications	Number of functions	(Over 1,500)*6	Over 1,500	(Over 2,900)*6	(Over 2,900)*6	(Over 1,000)*6	(Over 2,800)	(Over 2,100)	664	406	279	242	252	274	417	249	253	403	240	300	244	401	383
	Power supply (Main)	AAA × 4	AAA × 4	AAA × 4	AAA × 4	AAA × 2	AAA × 4	AAA × 4	AAA × 1 (LR03)	Two-way power (Solar + LR44 × 1)	Two-way power (Solar + LR44 × 1) : 3650P LR44 × 1 : 3950P	CR2032 × 1	AAA × 1 (R03) : 82ES PLUS Two-way power (Solar + LR44 × 1) : 85ES PLUS AAA × 1 (R03) : 350ES PLUS	AAA × 1(R03)	Two-way power (Solar + LR44 × 1) : 991ES PLUS AAA × 1 (R03) : 570ES PLUS	AAA × 1 (R03) : 82ES PLUS Two-way power (Solar + LR44 × 1) : 85ES AAA × 1 (LR03) : 350ES	AAA × 1 (R03)	Two-way power (Solar + LR44 × 1) : 991ES AAA × 1 (R03) : 570ES	AA × 1 : 82MS Two-way power(Solar + LR44 × 1) : 85MS LR44 × 1 : 350MS	AA × 1 : 100MS Two-way power (Solar + LR44 × 1) : 115MS	AA × 1	Two-way power (Solar + LR44 × 1) : 991MS LR44 × 1 : 570MS	Two-way power (Solar + LR44 × 1)
	Power supply (Backup)	—	CR2032 × 1	—	—	—	—	—	—	—	—	CR2032 × 1	—	—	—	—	—	—	—	—	—	—	—
	Approximate battery life Main (hours)	140 (LR03)*1	140 (R03)*2/ 230 (LR03)*2	200 (LR03)*1	200 (LR03)*1	140 (LR03)*1	230 (LR03)*1	230 (LR03)*1	1 year*3	3 years (LR44)*3	3 years (LR44)*3 : 3650P 9,000*4/3 years*5 : 3950P	5,000*4	17,000*4 : 82ES PLUS 3 years (LR44)*3 : 85ES PLUS 8,700*1 : 350ES PLUS	17,000*4	3 years (LR44)*3 : 991ES PLUS 17,000*4 : 570ES PLUS	17,000*4 : 82ES 3 years (LR44)*3 : 85ES 8,700*1 : 350ES	17,000*4	3 years (LR44)*3 : 991ES 17,000*4 : 570ES	17,000*4/2 years*5 : 82MS 3 years (LR44)*3 : 85MS 9,000*4/3years*5 : 350MS	17,000*4/2 years*5 : 100MS 3 years (LR44)*3 : 115MS	17,000*4/ 2 years*5	3 years (LR44)*3 : 991MS 9,000*4/3 years*5 : 570MS	3 years (LR44)*3
	Approximate battery life Backup (years)	—	2	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—
	Dimensions H×W×D(mm)	21 × 84 × 189.5	19.5 × 82 × 178	21.2 × 91.5 × 184	21.2 × 91.5 × 184	20.7 × 122 × 89	21.3 × 87.5 × 180.5	21.3 × 87.5 × 180.5	15.1 × 81.5 × 163	12.2 × 80 × 161	11.8 × 80 × 159	9.9 × 73 × 141.5	13.8 × 80 × 162 : 82ES PLUS / 350ES PLUS 11.1 × 80 × 162 : 85ES PLUS	13.8 × 80 × 162	11.1 × 80 × 162 : 991ES PLUS 13.8 × 80 × 162 : 570ES PLUS	13.7 × 80 × 161 : 82ES / 350ES 12.2 × 80 × 161 : 85ES	13.7 × 80 × 161	12.2 × 80 × 161 : 991ES 13.7 × 80 × 161 : 570ES	18.6 × 85 × 156 : 82MS 12.2 × 85 × 155 : 85MS / : 350MS	20 × 78 × 155 : 100MS 12.7 × 78 × 154.5 : 115MS	19.5 × 78 × 155	12.7 × 78 × 154.5	8.8 × 73 × 144
	Approximate weight (g)	280	213	225	220	200	205	205	150	105	100	85	100 / 95 / 100	100	95 / 100	110 / 105 / 110	110	105 / 110	125 / 100 / 100	133 / 105	130	105	74.3
	Case style	Snap-on hard	Slide-on hard	Slide-on hard	Slide-on hard	—	Slide-on hard	Slide-on hard	Integrated hard	Slide-on hard	Snap-on hard	Wallet	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard
	Dot matrix display	160 × 240 dots	64 × 128 dots	64 × 128 dots	64 × 128 dots	64 × 128 dots	64 × 128 dots	64 × 128 dots	31 × 96 dots	5 × 7 dots × 16 digits	5 × 6 dots × 12 digits	5 × 7 dots × 12 digits	31 × 96 dots	31 × 96 dots	31 × 96 dots	31 × 96 dots	31 × 96 dots	31 × 96 dots	5 × 6 dots × 12 digits	5 × 6 dots × 12 digits	5 × 6 dots × 12 digits	5 × 6 dots × 12 digits	5 × 5 dots × 4 digits
	Display capacity (characters)	20 × 17	21 × 8	21 × 8	21 × 8	21 × 8	21 × 8	21 × 8	16	16	12	12	15	15	15	15	15	15	12	12	12	12	—
	Mantissa + exponent digits	10 + 3	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	12 + 2
	Icon menus	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Internal operation digits	15	15	15	15	15	15	15	15	15	12	12	15	15	15	15	15	15	15	12	12	12	14
	Nested parentheses levels	Up to memory	26	26	26	26	26	26	26	24	24	24	24	24	24	24	24	24	24	24	24	24	18
Programming Functions	Program logic	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	●	●	—	—	—	—	—	—	—	—	—	—	—
	Memory (bytes)	515,000	146,000	62,000	62,000	63,000	62,000	20,000	28,500	680	360	1,103	—	—	—	—	—	—	—	—	—	—	—
	Program areas	Up to memory	Up to memory	Up to memory	Up to memory	Up to memory	Up to memory	Up to memory	Up to memory	4	4	Up to memory	—	—	—	—	—	—	—	—	—	—	—
	Storage memory area (Flash memory)	5.3MB	768KB	1.5MB	1.5MB	1.5MB	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Built-in formulas	—	—	—	—	—	—	—	128	23	—	—	—	—	—	—	—	—	—	—	—	—	—
Utilities	Natural textbook display / NATURAL-V.P.A.M.	●	—	●	●	●	—	—	●	—	—	—	●	●	●	●	●	●	—	—	—	—	—
	Key rollover function / Answer function / Auto power off	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Replay function / Multi-replay functions	(History)	●	●	●	●	●	●	●	●	●	● / —	●	●	●	●	●	●	●	●	●	●	—
	Replay copy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	—	●	—
	Backspace	●	—	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	CALC function	—	—	—	—	—	—	—	●	—	—	●	—	—	●	—	—	●	—	●	—	●	—
	SOLVE function	●	●	●	●	●	●	●	●	—	—	—	—	—	●	—	—	●	—	●	—	●	—
	Variables	Up to memory	28	28	28	28	28	28	26 – 2398	7	7	26 – 163	9	9	9	7	7	7	9	9	9	9	7
	Onboard function manual	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Syntax help	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Special Features	Base-*n* calculations (Binary/Octal/Hexadecimal)	●	●	●	●	●	●	●	●	●	●	●	—	—	●	—	—	●	—	●	—	●	●
	Logical operations	●	●	●	●	●	●	●	●	●	●	●	—	—	●	—	—	●	—	●	—	●	●
	Engineering symbol calculations	—	●	●	●	●	●	●	●	—	—	●	—	—	—	—	—	—	—	●	—	●	●
	Engineering notation (ENG/ENG)	—	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Scientific constants	—	—	—	—	—	—	—	40	40	—	—	—	—	40	—	—	40	—	—	—	40	128
	Metric conversions	—	—	●	●	—	●	●	—	—	—	—	—	—	40	—	—	40	—	—	—	40	—
CAS	Computer Algebra System	●	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
※ Basic Functions	Base specified logarithmic	●	—	●	●	●	●	●	●	●	—	—	●	●	●	●	●	●	—	—	—	—	—
	Percentage calculation (%)	●	—	—	●	—	—	—	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Simplification	—	—	●	●	—	●	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Integer division	—	—	●	●	—	●	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	GCD/LCM	●	●	●	●	—	●	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Angle unit (Deg, Rad, Grad)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Angle unit conversion (Deg, Rad, Grad)	● / ● / —	●	●	●	●	●	●	●	●	●	—	●	●	●	●	●	●	●	●	●	●	—
	Factorization into prime factors	●	—	—	—	—	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—
	Ratio calculation	—	—	—	—	—	—	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—
Calculus	Differentiation calculation	●	●	●	●	●	●	●	●	—	●	—	—	—	●	—	—	●	—	●	—	●	—
	Integration calculation	●	●	●	●	●	●	●	●	—	●	●	—	—	●	—	—	●	—	●	—	●	—
Algebra	Simultaneous equation	●	● (30 unknowns)	● (6 unknowns)	● (6 unknowns)	● (6 unknowns)	● (6 unknowns)	● (6 unknowns)	● (5 unknowns)	—	—	—	—	● (3 unknowns)	● (3 unknowns)	—	● (3 unknowns)	● (3 unknowns)	—	● (3 unknowns)	● (3 unknowns)	● (3 unknowns)	—
	Polynomial equation	●	● (Degree 2–30)	● (Degree 2-6)	● (Degree 2-6)	● (Degree 2, 3)	● (Degree 2-6)	● (Degree 2-6)	● (Degree 2, 3)	—	—	—	—	● (Degree 2, 3)	● (Degree 2, 3)	—	● (Degree 2, 3)	● (Degree 2, 3)	—	● (Degree 2, 3)	● (Degree 2, 3)	● (Degree 2, 3)	—
	Inequality calculation	●	—	—	—	—	—	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—
	Table function	●	●	●	●	●	●	●	●	—	—	—	●	●	●	●	●	●	—	—	—	—	—
	Matrix calculations	●	●	●	●	●	●	●	●	—	—	—	—	—	●	—	—	●	—	—	—	●	—
	Complex number calculation	●	●	●	●	●	●	●	●	●	●	—	—	—	●	—	—	●	—	●	—	●	●
Geometry	Geometry Application	●	—	● (Preloaded)	● (Preloaded)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Coordinate conversion (Pol, Rec) / Vector calculations	●	● / —	● / —	● / —	● / —	● / —	● / —	● / —	● / —	● / —	● / —	● / —	● / —	●	● / —	● / —	●	● / —	● / —	● / —	●	● / —
Probability	Combination, permutation (*n*C*r*, *n*P*r*)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Statistics	Random numbers / Standard deviation / Regression analysis	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Random integers	●	—	●	●	—	●	●	—	—	—	—	●	●	●	—	—	—	—	—	—	—	—
	List-based STAT data editor	●	●	●	●	●	●	●	●	●	●	—	●	●	●	●	●	●	●	●	●	—	—
	Linear regression	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	ab Exponential regression	●	—	●	●	—	●	●	●	—	—	—	●	●	●	●	●	●	—	—	—	—	—
	Advanced statistics	●	●	●	●	●	●	●	—	—	—	—	—	●	●	—	●	●	—	●	—	●	—
	Other regressions	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	—	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	—
Finance	Financial function	●	●	●	●	●	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spreadsheet	Spreadsheet	●	—	●	●	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Others	eActivity	●	—	●	●	● (eActivity Guide)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Data communication	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—	—	S-V.P.A.M.	S-V.P.A.M., Normal distribution	S-V.P.A.M.	S-V.P.A.M., Normal distribution	V.P.A.M.
	Others	Picture,Presentation, 3D graph,DiffEq Graph	Recursions	Recursions Backlight display	Recursions Backlight display	Recursions Backlight display	Recursions	—	Recursions	—	—	—	—	—	—	—	—	—					

※ **Other Basic Functions :** ●Trigonometric, inverse trigonometric (sin/cos/tan/sin^{-1}/cos^{-1}/tan^{-1}) ●Hyperbolic, inverse hyperbolic (sinh/cosh/tanh/sinh^{-1}/cosh^{-1}/tanh^{-1}) ●Exponential, logarithmic (log, ln, 10^{x}, e^{x}) ●Power and radical root (x^{2}/$^{x}\sqrt{}$/$\sqrt{}$) ●Fraction ●Rounding ●Sexagesimal ↔ decimal ●Display format (FIX, SCI)

*1 Continuous operation (assuming 5 minutes calculation and 55 minutes display per hour) *2 Continuous display of main menu *3 1 hour use per day *4 Continuous display of flashing cursor *5 When left with power turned off *6 Changes when OS is updated