## CASIO.



## ELECTRONIC CALCULATORS

General Catalogue 2008-2009


## -at ScIENTIFIG CALloULATOLIS



## Differential Equation Application

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

## Advanced CAS

(Computer Algebra System)
Beon capabilities have hice mathematical calculations. Natural input/output mathenematical functions have been expanded to include $F$ (Fourier transforms), $L$ (Laplace (canstorms), $\delta, \Gamma, H$, and more.


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


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

## ClassPad 330 Specifications

algebra

- CAS (Computer Algebra System)
- Fractions •Transformation (simplify, expand, factor)
- Algebraic $\left(\sqrt{ }, x^{2}, x^{-1}, x!, n \sqrt[n]{ }, x^{1}\right)$
- Real and Complex results • List • Matrix
- Combination $n C r$, Perrmutation $n P$
- Trigonometrics (sin, cos, tan, $\left.\sin ^{-1}, \cos ^{-1}, \tan ^{-1}\right)$
- Angle unit (Degree, Radian, Grad)
- Function graphing, polar, parametric and $x=f(y)$ equations
- Numeric evaluation of functions in tables
- Graph solve (root, max, intersection, inflection, distance) - Conics graphs (Parabola, Circle, Ellipse, Hyperbola, General figure) - Conics graph solve (Focus, Vertex, Directrix, Symmetry, Center, Radius) - Recursive and explicit sequence numerical tables and plots - Laplace transtorm, Fouriei transtorm, Fast Fourier transtorm (FFT)
calculus
- Hyperbolics (sinh, cosh, tanh, sinh ${ }^{-1}$, cosh $^{-1}$, tanh $^{-1}$ )
- Integration, Differential
- $\Sigma, \Pi$, lim • Dirac Delta, Heaviside Unit Step, Gamma
statistics
- List-based one- and two-variable statistical analysis
- Statisticical plot (Scatter Plot, $x$ LyLine, Normal Probability Plot, Histogran Box-whisker plot)
- Statistical regression graphs Distribution calculations)
geometry
- Constraint geometry (for education)
- Construction figures (Perpendicular, Midpoint, Intersection Angle Bisector, Parallele, Tangent to Curve) - Geometry figures (Circle, Arc, Ellipse, Hyperbola, Parabola, Triangle, Rectangle, $n$-gon, Point, Line Segment, Ray, Vector)
- Numeric evaluation of geometry animation in tables
- Labels (Text, Attached Angle, Measurement, Expression)
eactuity Application
eActivity creation •eActivity exploration (execution)
解
Other useful features
- Nrag \& drop - Natural format input of equations and expressions Nutural format display of results - Math, Alphabeet, 2D sofft keyboards - Command catalogue soft keyboard $\bullet$ Calculation History
- Mantissa + exponent: $15+3$ • Interactive manipulation for solving equations - 3 -dimensional graphs - Differential equation graphs - Numeric equation solver $\bullet$ - $i n a n c i a l$ calculations $\cdot$ Presentation feature - Program storage capacity: 500 KB (max) • con menus
- Full screen display/Split screen display - Sottware uppradeabiilty (maintenance, feature upgrades)
- User-defined avriable 0 User-defined function (extends built-in functions) - Foldder-based memory management 0 Unit-to-unit screen image transfer - Resesting///nitializizg memory - Selectatale display language - Auto Power Off (APO) - Ending Screen/User-defined Ending Screen a Windows computer. You can use it to transter certain ClassPad unit files and to back up all ClassPad unit data on your computer. You can also
transfer ClassPad unit screen captures to your computer.

HARDWARE

- Dimensions: $21.0(\mathrm{H}) \times 84.0(\mathrm{~W}) \times 189.5(\mathrm{D}) \mathrm{mm}$
- Approximate weight: 28 - 0
- Battery type: Four AAA-size batteries LRO3 (AM4)
- Battery life: Approx. 140 hours continuous operation
-assuming 5 minutes calculation and 55 minutes display per hour) - ispplay type: $160 \times 240$-dot LCD - Touch Panel (Pen Touch Operation) - User-available RAM: 500 KB
- User-available Flash ROM (Add-in area): 5.3 MB

- Uata communication (via USB and
- US cable for connecting with $P$ P
- 3 -in cable for connecting with
- 3 -pin cable for connecting with other ClassPad unit or $E A-200$
options
- ClassPad Manager Version 3.0 FA-CP330AAB • EA-200 Data Analyzer
- OH-ClassPad 330 SET (Overhead projection model)

Latest OS update for ClassPad 300 series:
http://edu.casio.com/download_service/



ALGEBRA FX 2.0 PLUS

Main Functions

## Algebra Applications

Computer Algebra System (CAS)





Algebra Easy equation manipulation by students






## Graphic Models


$f_{x}$-9860G Slim A compact and slim body with user-friendly design and interface

##  



An innovative approach for the math \& science class environment User-friendly Interface
colour power graphic




Main Functions (crx-98506C Pustrx-9750GA Pus)


CFX-9850GC PLUS $f_{x-9750 G A ~ P L U S ~ p o w e r ~ g r a p h i c ~}^{\text {a }}$


POWER GRAPHIC

- Large display (128×64 dots) •Graphic •functions • Dynamic graph • Dual graph - Conic section graph $\bullet$ Regression graph $\bullet$ Graph solve $\bullet$ Integrations $\qquad$ Differential and quadratic difterential calculations - Complex number calculations Table and graph $\bullet$ Recursion graph $\bullet$ - List-based statisitics $\bullet$ Advanced statistics
BAIIC-like program functions - Linear equations from two to six unknowns Quadratic equations, Cubic equations • Matrix operations


$f x-7400 G P L U S$

Main Functions


TRIGONOMETRY Performs calculations for trigonometric \& inverse trigonometric functions. STATISTICS
Standard Deviation Performs calculations of single-variable
statistical data and graphs the result statisticical data and graphs the eresult.
Rhis cosaram
Hen

|  |  | yrap and Ine |
| :---: | :---: | :---: |
| $1 \square$ |  | - |
| Regression Performs calculations of paired-variable statistical data and graphs the result. |  |  |


| Programmable Models |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| SUPER-FX PLUS $f x-5800 P$ | $\begin{aligned} & \text { SUPER-FXPLLS } \\ & f x \text { - } 50 F \text { PLUS } \end{aligned}$ | $\begin{array}{ll} \text { SUPER-FX } & \text { SUPER-FX } \\ \text { fx-3650P } & f x-3950 P \end{array}$ | $f x$-4500PA |
| Natural Texibook Display and MORE POWERFUL Program Functions <br> - Program function • Matrix calculations <br> - Differential and integration - Recursions <br> - Solve function - Complex number calculations <br> - Base-n calculations - Data transmission between <br> two fx-5800P calculators • 26 to 2398 variables <br> - Fraction calculations - 40 scientific constants <br> - 128 built-in formulas • Multi-replay function <br> - Statistics (List-based Statistics, Standard deviation, Regression analysis) • Integrated hard case swings back a full 360 degrees. | $f_{x-50 F H}^{\substack{\text { HREAA } \\ \text { qpoed model }}}$ <br> BASIC-like Program, Perfect Algebraic Method, 2 -line Display, Multi-replay Function <br> - Program function •Multi-replay function <br> - 2 -line display • Fraction calculations <br> - Combination and permutation • 23 built-in <br> formulas -40 scientific constants <br> - Statistics (STAT-data editor, Standard <br> deviation, Regression analysis) <br> -7 variables • Plastic keys <br> - Comes with slide-on hard case | Multi-replay Function, 2 -line Display, Perfect Algebraic Method <br> - Program function •Multi-replay function <br> - 2 -line display •Fraction calculations <br> - Combination and permutation • Differential and <br> integration • Statistics (STAT-data editor, <br> Standard deviation, Regression analysis) <br> - Base-n calculations/Conversions <br> - Logical operations - Complex number <br> calculations $\cdot 7$ variables <br> - Plastic keys •Comes with snap-on hard case | 2-line Display and Program File System <br> - 2 -line display shows formulas and results simultaneously • Versatile program area management: up to 1,103 program steps, and 26 (standard) to 163 variables <br> - Program file system for storing multiple programs • Replay function <br> - Engineering symbol calculations <br> - Formula memory • Integrations <br> - Statistics (Standard deviation, Regression analysis) • Base-n calculations/conversions <br> - Logical operations |

## STANDARD MODELS

|  |  | Natural textbook display format! |  |
| :---: | :---: | :---: | :---: |
| 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 <br> Input expressions and arithmetic operations as they appear in written form. | Natural output <br> Calculation results appear in the same format as they are witten. $\left\|\begin{array}{ll} \frac{\sqrt{18}}{3}+\frac{\sqrt{6}}{\sqrt{3}}-\sqrt{32} & \\ & -2 \sqrt{2} \end{array}\right\|$ | Full dot display Equations and statistical data is displayed in a clear, easy-to-read format <br> Conventional input method can also be used |

World's first ${ }^{*}$ ! No one upgrades the classroom environment like CASIO!

| Select the ratio type and enter the non- $x$ coefficients... $a: b=x: d \rightarrow 1: 2=x: 10$ | The calculator displays the value of $x$. $x=5$ |
| :---: | :---: |
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New equation mode g55es Pus) s70es pus) g91Es plus

$\square$ Inequality gesspus
Select the inequality type and
enter the non- $x$ coefticients...

$x^{2}+2 x-15<0$ | The calculator displays the |
| :--- |
| solution of the inequality |



New feature!
The ES PLUS Series now is easier to use than ever!
$\square$ Prime factorization (82ESP PLUS) B5ES PLUS) (350ES PLUS) (95ES PLUS

| Determine the integers for a sum of -15 and a product of 56 ... | Input 56. <br> The calculator displays the factors. $56=2^{3} \times 7$ | 56 - ${ }^{\text {ama }}$ | $\overline{\text { A }} \overline{\text { FACT B B }}$ |
| :---: | :---: | :---: | :---: |
| Problem:Factor $x^{2}-15 x+56$. <br> Result: $(x-8)(x-7)$ |  | $\underbrace{2^{3 \times 7}}_{\text {Fadorodisplay }}$ |  |

$\square$ Random integers 82Es PLUS (85ES PLUS) (350es PLUS g5Es PLUS (570ES PLUS g91ES PLUS



New functions: • Prime factorization • Random integers
Standard functions:

- 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



fx-95ES PLUS
fx-570ES PLUS


fx-991ES PLUS

New functions: • New equation mode •Random integers Standard functions:

- FTaction casics (List-based STAT data editior, standardard deviation, regression analysis) - 9 variables $\bullet$ Table tunction - Comes with new slide-on hard case fx-82ES PLUS/85ES PLUS/350ES PLUS functions, in addition to:
 - Vector calculations •Complex number


Natural Display Models

|  |
| :---: |
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AAA-size (RO3) batter

$f_{x}-85 E S$

fx-350ES
fx-500ES

| Two-way power | AAA-size (R03) batery |  |  |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { CASIO } \\ & \text { fx-99IES } \end{aligned}$ |  | 4 | - Fraction calculations <br> - Combination and permutation |
| $\int_{a}^{\pi} e^{x} \sin (X) d x$ 12.07034632 | $\sin ^{2}(x) y_{x=\frac{\pi}{2}}$ |  | editor, standard deviation, regression analysis) <br> -7 variables |
|  |  |  | - Table function <br> - Comes with new slide-on hard |
| -mber |  |  | fx-82ES/85ES/350ES functio |
| -0000.0 |  | OTM | in addition to: |
| (7) 8- 9 | (3) ㅂata | Pamald | - Equation calculations |
| $456 \times$ | $\times$ | Sex | - Integration/differential calculation <br> - Matrix calculations |
| 123 ${ }^{2}+8$ | (1) ${ }^{3}+0$ |  | ector calculatio |
| - (100 |  |  | omplex number ca |
| $f_{x-991 E S}$ | fx-570ES |  | - Soave function |

S-V.P.A.M. Models


## S-V.P.A.M. Models



Plastic keys and protective hardcase provid Plastic keys and protective hardcase
the best of operation and durability


Financial Consultant

$\square$ Easy operation with parameters

Calculate the result.

| The result appears |
| :--- |
| immodialdy |
| prestes you the Solve key. | SOLVE

Create shortcuts.
Once you use a parameter value or setting in a
calculation, you can assign it to a shortcut key calculation, you can assign it to a shortcut
for instant recall whenever you need it. This fer instant tecarl whenever you need is great for repeat calculations.
feat

 - Collect data at rates of up to 50,000 points
per second for up to 120,000 points.
-CFX-9850 series, ALGEBRA FX 2.0 series, fx-9860G series, and ClassPad series. Includes:

- CASIO Data
CASIO Data Analyzer
Temperature probe
Optical probe
Voltage probe
Data communication cable: SB-62 - Sout case AA-size alkaline batteries


## Graphic Scientific Calculator Projection Set




OHP Projection Model


| Scientific Calculators Specification Table |  | Graphic Modeds |  |  |  |  |  |  |  | Provammable Moide |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Classpat 330 |  | 1x.88800 Sim | x.9860 So | 9860G | cxxesoncepus | Sapus | P400G PLus | Ix-5800p | fx-50F PLUS | ${ }^{\text {x-3650 }}$ |
| Speifitatains | Numberot tuntions | (Over, 500$)^{\text {/6] }}$ | Over 1,500 | (Over 1,000$)^{\text {/4 }}$ | (0ver 1,000) ${ }^{\text {c/ }}$ | (Over 1,000$)^{\text {/ }}$ | 905 | 900 | 406 | 664 | 406 | 279 |
|  | Powers sppply (Main) | anta 4 | maxa | $44 \mathrm{x} \times 2$ | athex | anax 4 | 444x 4 | ank 4 | man 2 | Manx (1093) | Two-way power | Two-way power |
|  | Powersupply (Batkup) | - | CR2032 $\times 1$ | - | - | - | CR2032 $\times 1$ | CR2032 $\times 1$ | CR2032 $\times 1$ | - | - | - |
|  | Approximate atatery lie Main (tuous) | ${ }^{140}\left(\underline{1 R O 3)}{ }^{11}\right.$ |  | 140 (LRO) ${ }^{11}$ | 300 (1003) ${ }^{1 /}$ | 300 (LRO) ${ }^{11}$ |  | $\underbrace{240(10303)^{24}}_{420} 4$ | $900(803)^{3 / 4}$ | 1 year ${ }^{\text {b }}$ | (R44) ${ }^{\text {a }}$ | 3jears (LR44) ${ }^{\text {a }}$ |
|  | Approximate atatey lie eackup (yeas) | - | 2 | - | 5 | 5 | 2 | 2 | 2 | - | - | - |
|  | Dimensions $4 \times 1 \times x /(m m)$ | $21 \times 84 \times 189.5$ | 19.5822x 718 | $20.7 \times 122 \times 89$ | $24 \times 25 \times 184.5$ | $24 \times 25 \times 1845$ | $24.5 \times 8 \times 182.5$ | $21.6887 \times 19.5$ | $23 \times 85.5 \times 169$ | 15.1881.59163 | $122 \times 80 \times 161$ | 11.8880 $\times 159$ |
|  | Approxima eveigh (g) | 280 | 213 | 200 | 265 | 260 | 215 | 205 | 185 | 150 | 105 | 100 |
|  | Casestye | Snap-onhard | Slideonhard | - | Slide-on hard | Slideoonlard | Srap-onlard | Slide-on hard | Srap-onlard | Integated hard | Slideon hard | Snap-onhard |
|  | Dot matixixisislay | $160 \times 240$ dots | $64 \times 128$ dots | $64 \times 128$ dots | $64 \times 128$ dots | $64 \times 12800$ ts | $64 \times 128 \times 0$ dis | 64x 128 dots | $48 \times 8000$ dis | $31 \times 96$ dots | ${ }_{\substack{5 \times 7 \text { dols } \times \\ 16 \text { digis }}}^{\text {a }}$ |  |
|  | Display capacity Claracters) | $20 \times 17$ | $21 \times 8$ | $21 \times 8$ | $21 \times 8$ | $21 \times 8$ | $21 \times 8$ | $21 \times 8$ | $13 \times 6$ | 16 | 16 | 12 |
|  | Mantissa +exponenat digils | 10+3 | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | $10(9+2)$ | 10+2 | 10+2 | 10+2 |
|  | lornems | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - |  |
|  | Intemal operation digits | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 12 |
|  | Nestet paerenticsse evels | Uptomemory | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 24 | 24 |
| ${ }_{\substack{\text { Programming } \\ \text { Functions }}}$ | Progam logic | - BASCOCHIVe) | Basc-lilee |  | - BASCOCHILE) | Basc-lilie) | - Basca-ilice | - BASCC-1/ile) | $\bullet$ Bascalilile) |  | Basc-II | $\bullet$ |
|  | Memory (bytes) | 515,000 | 146,000 | 63,000 | 63,000 | 63,000 | 61,000 | 28,000 | 20,000 | 28,500 | 680 | 360 |
|  | Program areas | Upto memory | Uptomenory | Uptomemory | Up tomemory | Uptomemory | Uptomemory | Uptomenory | Uptomemory | Uptomemory | 4 | 4 |
|  | Storase menory area (Fissas memory) | 5.3Мв | 768kB | 1.5MB | 1.5MB | 1.5MB | - | - | - | - | - | - |
|  | Buillitinornuas |  |  |  |  |  | - |  |  | 128 | 23 |  |
| Uuilites |  | $\bullet$ | - | $\bullet$ | - | $\bullet$ | - | - | - | $\bullet$ |  |  |
|  | Key rolluertunction | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Replay unction | (History) | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Multreeraly yuncions | (History) | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Replay copy | - | - | - | - | - | - | - | - | - |  |  |
|  | Backspace | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | - | - | - | $\bullet$ | $\bullet$ | $\bullet$ |
|  | calcturction | - | - |  | - |  | - | - | - | - | - |  |
|  | solve unution | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | - | - |
|  | Answer function | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Varables | Iomenory | 28 | ${ }^{28}$ | 28 | 28 | 28 | 28 | 26 | -2398 | 7 | 7 |
|  | Onioard function manal | - | - | $\bullet$ | - | - | - | - | - | - | - | - |
|  | Synux xelp | - | - | $\bullet$ | - | - | - | - | - | - | - | - |
|  | Alut oneve off | - | - | - | - | - | - | - | - | - | - | - |
| $\underbrace{}_{\substack{\text { Special } \\ \text { Featues }}}$ |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Logical pepations | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ |  |
|  | Engineeins smmol calululions | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | - |  |
|  | Engineering notaion (ENGGEIEG) | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | - |
|  | Stientific consants | - | - | - | - | - | - | - | - | 40 | 40 | - |
|  | Mertic coneresions | - | - | - | - | - | - | - | - | - | - |  |
| cas | Computere Alseras Ssistem | - | $\bullet$ | - | - | - | - | - | - | - | - |  |
| $\underbrace{\substack{\text { a }}}_{\substack{\text { Basie } \\ \text { functions }}}$ |  | $\bullet$ | $\bullet$ | - | - | - | - | - | - | - | - | - |
|  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | $\bullet$ | $\bullet$ |
|  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ |  |
|  | Bases sedefiedel logarithmic | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | - | - | - | $\bullet$ | $\bullet$ | - |
|  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ |
|  | Fration | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Pereenaga eatualiaion (\%) | - | - | - | - |  | - |  |  | - | - |  |
|  | Rounding | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Simpification |  | - |  | - |  |  |  | $\bullet$ |  |  |  |
|  | Integer ivision | - | - | - | - | - | - | - | $\bullet$ | - | - |  |
|  | Sexasesimal $\oplus$ definal | - | $\bullet$ |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  | $\bullet$ | $\bullet$ |  |
|  | Display tormat (fx, SCI) | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Angle unit (0ee, Ra, Grad) | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | - | $\bullet$ |  |
|  | Anjle nitit toneresioion (Des, Rad, Graal) | $101-$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  |  | - | - | - | - | - | - | - | - | - | - | - |
|  | Difieferntidition alalulution | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |  |
| Calaulus | Interation calcululition | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | - | $\bullet$ |
| Alebera | simulaneous eunation | - |  | -(6umomens) | -(bunkomes) | -(6umbows) | -(6umbums) | -(6uncoms) | - | -(5uncomes) | - |  |
|  | Polymomiale enation | $\bullet$ | - Deazeere-30) | - (0areere, ${ }^{\text {a }}$ | $\bullet$ (0agee2,3) | - (0aree, 3) | - (0areer,3) | $\bullet$ (eareere, ${ }^{\text {a }}$ | - | $\bullet$ (eareere,3) | - | - |
|  | Inewuliliy calualaion | - | - | - | - | - | - | - | - | - | - | - |
|  | Table function | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - |
|  | Cominex xumber caluutuon | : | : | : | : | : | : | - | - | : | - | - |
|  | Corrinate conversion (Pal, Rec) | - | - | - | - | - | - | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
| Geometry | Vectioralululitions | - | - | - | - | - | - | - | - | - | - |  |
| Probability | Combination, permulation (ur, npr) | - | - | - | - | - | - | $\bullet$ | - | $\bullet$ | - | - |
| Statisics | Random numbers | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Random integes |  | - | - |  | - |  | - | - | - |  |  |
|  | Listhasedestitar dala efilior | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Standerdidevidition | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Regerssion analysis | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Linearregesesion | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | - |
|  | $a b$ Exponential regersion | $\bullet$ | - | - | - | - | - | - | - | $\bullet$ | - | - |
|  | Adrancest sataisicis | - | - | - | - | - | - | - | - |  | - | - |
|  | Othereregessions |  | Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lost | Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lost | Med, Quad, Cubic Quart, Log, Exp, Quart, Log, Exp, Pwr, Sin, Lgst | Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lost | Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lost |  |  | Log.Exp. Purr, |  |  |
| Finance | Financial lunction | - | - | $\bullet$ | - | - | - | - | - | - | - | - |
| Spreastinet | Spreastsinet | $\bullet$ |  | $\bullet$ | - | - |  |  | - | - | - | - |
| Oilers | eativity | - | - | - Peltringlaine) | $\bullet$ |  |  |  | - | - | - | - |
|  | Data communication | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - |
|  | Others |  | Recursions | $\begin{array}{\|l\|l\|} \substack{\text { Recursions } \\ \text { Baclight } \\ \text { display }} \end{array}$ | Recursions | Recursions | Recursions | Recursions | - | Recursions | - | - |


| Scientific Calculators Specification Table |  | Proprammable Woide |  | Standard Modids |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Ix-3950p | 1x-4500PA | 1.8.2es Pus | \|x.sses Pus | -300Es Pus | \|x.95Es Pus | \|x.9915 Plus | 570es Pus | Ix-82Es | tx-65Es | Ix-350Es | x-500Es |
| Speatifataions | Number of tuncioins | 279 | 242 | 252 | 252 | 252 | 274 | 417 | 417 | 249 | 249 | 249 | 253 |
|  | Pouers supply (Main) | $184 \times 1$ | crev23x1 | A44x (100) | Two-way power | A44x (108) | A4Ax (103) | Two-way power (Solar + LR44 $\times 1$ ) | AnAx (103) | A4Ax (103) | Two-way power <br> (Solar + LR4 | A4x+(180) | A4Ax(103) |
|  | Powerssuply (Backup) | - | cre232x1 | - | - | - | - | - | - | - | - | - | - |
|  | Approximate atatery life Main (hours) |  | 5.000" | 17,000* |  | ${ }^{8.700 " 1}$ | 17,000* |  | 17,000* | 17,000* | (3years | $8,700^{1}$ | 17,000* |
|  | Approximate batery lie Eackup years) | - | 2 | - | - | - | - | - | - | - | - | - | - |
|  | Dimensions $4 \times \times \times$ ( $(m m)$ | 11.8880 $\times 159$ | $9.9 \times 73 \times 14.5$ | $13.8880 \times 162$ | 11.1.808 $\times 162$ | 138880x 162 | $138 \times 8 \times \times 162$ | 11. $1 \times 80 \times 162$ | 1388800 162 | $137.80 \times 161$ | $122 \times 80 \times 161$ | 13.7880 161 | $13.7 \times 8 \times 160$ |
|  | Approximie weight (9) | 100 | 85 | 100 | 95 | 100 | 100 | 95 | 100 | 110 | 105 | 110 | 110 |
|  | Casesille | Snap-onhard | Wallet | Slideoonhard | Slideonhard | Slide onhard | Slide-on hard | Slideonhard | Slideonhard | Slideo.onhard | Slide onhard | Slideoonlard | Slide-on hard |
|  | Dot matixixisislay | $5 \times 6$ dots $\times$ <br> 12 digits | $\underset{\substack{5 \times 7 \text { dots } \times x \\ 12 \text { digits }}}{\substack{\text {. } \\ \hline}}$ | $31 \times 86$ dots | $31 \times 96$ dots | $31 \times 96$ dots | $31 \times 98$ dos | $31 \times 96$ dos | $31 \times 986$ dots | $31 \times 96$ dots | $31 \times 96$ dots | $31 \times 98$ dots | $31 \times 98$ dots |
|  | Display capaity Claracters) | 12 | 12 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
|  | Mantisat exponenet digilis | 10+2 | $10+2$ | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 |
|  | Iornmens |  |  | - |  | - | - |  | - |  |  |  |  |
|  | Intemal operation digits | 12 | 12 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
|  | Nestet parenticsess evels | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| ProgrammingFunctions | Program logic | $\bullet$ | $\bullet$ | - | - | - | - | - | - | - | - | - |  |
|  | Menory (bytes) | 360 | 1,103 | - | - | - | - | - | - | - | - | - | - |
|  | ${ }^{\text {Program areas }}$ | 4 | Uptomenory | - | - | - | - | - | - | - | - | - | - |
|  | Storae menory yeae (Fisas memory) | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Buill-itiommlas | - | - | - | - | - | - | - | - | - | - | - | - |
| Uuillies | Natural exxtookdisisplay /IATunA-V.P.P.M. | - | - | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Key rolover function | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | - | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Replay tuction | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | - | $\bullet$ | - | $\bullet$ |
|  | Multirepelay tuntions | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Replay copy | - | - | - | - | - | - | - | - | - |  |  |  |
|  | Backspace | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | calc function | - | $\bullet$ | - | - | - | - | - | $\bullet$ | - | - | - | - |
|  | solve unction | - | - | - | - | - | - | $\bullet$ | $\bullet$ | - | - | - | - |
|  | Anssuer function | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Variabes | 7 | 26-163 | 9 | 9 | 9 | 9 | 9 | 9 | 7 | 7 | 7 | 7 |
|  | Onnoard function manual | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Symax xelp | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Alto pover off | - | $\bullet$ | - | - | $\bullet$ | - | - | - | $\bullet$ | - | - | - |
| $\begin{array}{\|c} \substack{\text { Special } \\ \text { features }} \end{array}$ |  | $\bullet$ | $\bullet$ | - | - | - | - | - | $\bullet$ | - | - | - | - |
|  | Logical pepations | $\bullet$ | $\bullet$ | - | - | - | - | - | $\bullet$ | - | - | - | - |
|  | Engineeringsymbol calculations | - | $\bullet$ | - | - | - | - | - | - | - | - | - | - |
|  | Engineering notaion (ENGE EIVG) | $\bullet$ | - | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | - | $\bullet$ |
|  | Stienfific consants | - | - |  | - | - | - | 40 | 40 | - | - | - | - |
|  | Mericicomesesions | - | - | - | - | - | - | 40 | 40 | - | - | - | - |
| cas | Computer Alsetra System | - | - | - | - | - | - |  |  |  |  |  |  |
| ${ }_{\substack{\text { Basit } \\ \text { functions }}}^{\substack{\text { a }}}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Exponeneria, logarithmic (log, $\left.10,10^{\prime}, e^{\prime}\right)^{\prime}$ | - | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | - | $\bullet$ |
|  | Bases sedifiel ofogatilmic | - | - | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  |  | - | $\bullet$ | - | - | - | - | - | - | - | - | - | - |
|  | Fration | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Peremenage ealululion (\%) | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | - | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Rounding | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Simplification | - | - | - | - | - | - | - | - | - | - |  | - |
|  | Integer ivision | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Sexagesimal + decimal | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | $\bullet$ | - | - | - | - | - |
|  | Display format (FX, SCI) | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Angle niti( Deen Rav, Grad) | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | - | - | $\bullet$ |
|  | Angle unit conversion (Jea, Rata, Grad) | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Factoriation into prime fators | - | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | - | - | - | - |
|  | Ratio calulution | - | - | - | - | - | - | - | - | - | - | - | - |
| Caluus | Dilferenidition calululition | $\bullet$ | - | - | - | - | - | $\bullet$ | $\bullet$ | - | - | - | - |
| AIgetra | Integration calculaion | $\bullet$ | $\bullet$ | - | - | - | - | $\bullet$ | - | - | - | - | - |
|  | Simultaneus eunation | - | - | - | - | - | - 3 unhowns | - ${ }^{\text {aunkunss }}$ | - ${ }^{\text {anhmounss }}$ | - | - | - | - (3untomss) |
|  | Polynomial equation | - | - | - | - | - | $\bullet$ (expere, 31 | - Oexpere,3) | $\bullet$ (0eyre2,3) | - | - | - | - (eareere, ${ }^{\text {a }}$ |
|  | Inequalit alaculaion | - | - | - | - | - | $\bullet$ | - | - | - | - | - |  |
|  | Table function | - | - | - | $\bullet$ | $\bullet$ | - | - | $\bullet$ | $\bullet$ | $\bullet$ | - | - |
|  | Matix calculations | - | - | - | - | - | - | $\bullet$ | $\bullet$ | - | - | - | - |
|  | Complex xumber alaulation | - | - | - | - | - | - | - | - | - | - | - | - |
| Geometry | Coordinat eoveresiosi (Pol, Ree) | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
| Probability | Combination, permulation (nct, ner) | $\bullet$ | - | - | - | - | - | - | - | $\bullet$ | - | - | $\bullet$ |
| Staitisiss | Random umbers | - | $\bullet$ | - | - | - | - | - | - | $\bullet$ | $\bullet$ | - | $\bullet$ |
|  | Random integers | - | - | $\bullet$ | - | - | - | - | $\bullet$ | - | - | - | - |
|  | Listhaseds Stat dala e elitor | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ |
|  | Standard devidition | - | - | - | - | - | - | - | - | $\bullet$ | - | - | $\bullet$ |
|  | Regerssionanalys | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Linear reperssion | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | $a b$ Exponential regession | - | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Advaneeds salasitics Oitheregesions |  | - |  |  |  |  |  | Loo.Ev, Pruw, | $\log$ Eveperw, $_{-}$ | log.Expeprit | log Exp, Pur, | $\log$ Exp, Pum, $_{\text {- }}$ |
| Finame | Finimerial function | im, 保 ${ }^{-}$ | - |  | imolad |  |  | im, and |  | in, ouad | invorad |  |  |
| Spreastiseet | Spreastiseet | - | - | - | - |  | - | - | - | - | - | - | - |
| Oiners | eadtivity | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Dala communication | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Oiners | - | - | - | - | - | - | - | - | - | - | - | - |

Scientific Calculators Specification Table

| Scientific Calculators Specification Table |  | Standard Modeds |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | tx-991Es | tx-570es | tx-82ms | tx-55ms | 1x-350ms | tx-95ms | tx-100ms | tx-115ms | \|x-99114s | tx-570ms | tx-992s | tx-901 |
| Speefictations | Numberofturcioins | 403 | 403 | 240 | 240 | 240 | 244 | 300 | 300 | 401 | 401 | 383 | 150 |
|  | Powers spply (main) |  | A4Ax (183) | ${ }^{4 \times 1}$ | (10.ayp (inex | ${ }^{184 \times 1}$ | A4x 1 | A $4 \times 1$ |  | Two-way powe (Solar + LR44 x | $184 \times 1$ |  |  |
|  | Powersupply (Backup) | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Approximate atatey lite Main (hours) |  | 17,000" |  | (3years | g.0.004, <br> 3ivars <br> 10 | ${ }^{17,700^{-4 / 1}}{ }^{2}$ | ${ }^{17,700^{+4}}{ }^{2}$ | ( years | $\underbrace{}_{\substack{\text { 3jears } \\ \text { (LR4) }}}$ | givaralt |  |  |
|  | Approximate batery lie Eackup (years) | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Dimensions $\times x \times x \times(m m)$ | 122880x $\times 161$ | 13.780x $\times 161$ | 18.6 $\times 5 \times \times 156$ | 122x85x 155 | 122 $285 \times 155$ | 195x78x 155 | $20 \times 78 \times 155$ | 127>78× 14.5 | $127 \times 78 \times 1545$ | 127x78×154, | 88>73x $\times 14$ | $13.5 \times 73 \times 14.5$ |
|  | Approximite weight (g) | 105 | 110 | 125 | 100 | 100 | 130 | 133 | 105 | 105 | 105 | 74.3 | ${ }^{67}$ |
|  | Casestyle | Slideornhard | Slideonhard | Slideon hard | Slideon hard | Slideornhard | Slideon hard | Slide-onhard | Slideoonhard | Slideon hard | Slideornhard |  | Slideonh hard |
|  | Dotmatixidisislay | $31 \times 96$ dots | $31 \times 96$ dots | $\begin{gathered} 5 \times 6 \text { dodisx } x \\ \text { 12didits } \end{gathered}$ | $5 \times 6$ dots $\times$ 12 digit | $\underset{\substack{5 \times 6 \text { dots } x \\ 12 \\ 120 \\ \hline \\ \text { dits }}}{ }$ <br> 12 digits | $\begin{gathered} 5 \times \text { dois } x \\ 12 \text { diditits } \end{gathered}$ | $\begin{gathered} 5 \times 6 \operatorname{doditsx} \\ \text { 12difits } \end{gathered}$ | $\begin{gathered} 5 \times x \text { dolis } x \\ 12 \text { digits } \end{gathered}$ | $\begin{gathered} 5 \times 6 \text { dodisx } x \\ \text { 12didits } \end{gathered}$ | $5 \times 6$ dots $\times$ 12 digit | $\begin{gathered} 5 \times 5 \text { doits } x \\ 4 \text { dioits } \end{gathered}$ | - |
|  | Display capacity (charaters) | 15 | 15 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | - |  |
|  | Mantissa texponentidigils | 10+2 | 10+2 | $10+2$ | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | 10+2 | $12+2$ | 10+2 |
|  | Iornmens | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Intena loperaion digits | 15 | 15 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
|  | Nestetep paerentesess evels | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 18 | 18 |
| ProgrammingFunctions | Program logic | - | - | - | - | - |  | - | - |  | - |  |  |
|  | Memory (bytes) | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Program iease | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Starae memory (eaed flast memory) | - | - | - | - | - | - | - | - | - | - | - | - |
| Uutilies | Natural extrookd display / Matualv.v.p.a.M. | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Keyrolover finction | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Replay yunction | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |  |
|  | Multreeplay luctions | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | - | - |
|  | Replay copy |  |  |  | - | - | - | $\bullet$ | - | $\bullet$ | - | - | - |
|  | Backsace | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | calc iuntion | $\bullet$ | $\bullet$ | - | - | - | - | $\bullet$ | - | $\bullet$ | - | - | - |
|  | solve function | $\bullet$ | $\bullet$ | - | - | - | - | $\bullet$ | $\bullet$ | $\bullet$ | - | - | - |
|  | Answer function | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | - |
|  | Varialles | 7 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 7 |  |
|  | Onioard turction mamal | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Synax heip Autp ouve off |  | $\bigcirc$ | - | - | - | - | - | - | - | - | - | - |
| $\underset{\substack{\text { Special } \\ \text { Featues }}}{ }$ |  | $\bullet$ | $\bullet$ | - | - | - | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Logical operations | - | - | - | - | - | - | $\bullet$ | - | - | - | - | - |
|  | Engineerins smmbol calulalions | - | - | - | - | - | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Engineering notation (EVGUEEEEG) | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Scientific constans | 40 | 40 | - | - | - | - | - | - | 40 | 40 | 128 |  |
|  | Mericic conersions | 40 | 40 | - | - | - | - | - | - | 40 | 40 | - | - |
| cas | Computer Alsetra Ssisiem | - | - | - | - | - | - | - | - | - | - | - |  |
| ${ }_{\substack{\text { Basic } \\ \text { functions }}}^{\text {d }}$ |  | - | $\bullet$ | $\bullet$ | - | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |
|  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Exponentia, Ogarithmic (lo, $\left.1,10,10^{\circ} e^{\prime} e^{\prime}\right)$ | $\bullet$ | - | - | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | $\bullet$ |
|  | Base specified logaritmic | - | - | - | - | - | - | - | - | - | - | - |  |
|  | Pouer and fadidal | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Fration | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Pereentage alaulalion (\%) | - | - | - | - | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | - | - | $\bullet$ |
|  | Rouning | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Simplification Integer division | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Sexasesimal + decimal | - | - | $\bullet$ | - | $\bullet$ | $\bullet$ | - | - | $\bullet$ | - | - | - |
|  | Display lomat (FX, SCI) | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | $\bullet$ | - |
|  | Angle unit (0eg, Ra, Grad) | - | $\bullet$ | - | $\bullet$ | $\bullet$ | - | $\bullet$ | - | - | - | - |  |
|  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ |
|  | Fatotriation intop pime factors |  |  |  | - | - |  |  |  |  |  | - |  |
|  | Ratiocalulution | - | - | - | - | - | - | - | - | - | - | - |  |
| Calalus | Dififerentiation alalulation | $\bullet$ | $\bullet$ | - | - | - | - | $\bullet$ | $\bullet$ | $\bullet$ | - | - | - |
| Alsenra | Integration calculaion | $\bullet$ | $\bullet$ | - | - | - | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - |
|  | simultaneus equation |  |  |  |  |  |  | - (unknoms) | $\bullet$ - ${ }^{\text {uninkuns }}$ | - ${ }^{\text {ankinoms }}$ | - 3 uninoms |  | - |
|  | Palymomial equation | - (0ersere,3) | - (0exrex, 2) | - | - | - | - (0ageer, 3) | - Degerer 2, 3 ) | - (0egree, 3 ) | $\bullet$ (0exfer, 3) | - (0atere,3) | - | - |
|  | Ineulality alalualion | - | - | - | - | - | - | - | - | - | - | - | - |
|  | (Tadele tuncion | $\bullet$ | $\bullet$ | - | - | - | - | - | - | - | - | - | - |
|  | Complex xumber alaulution | $\bullet$ | $\bullet$ | - | - | - | - | - | - | $\bullet$ | - | - | - |
| Geometry | Corrinate conversion (Pol, Rec) | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
| Probabilily | Vecotralaulalions | $\bullet$ | $\bullet$ | - | - | - | - | - | - | $\bullet$ | $\bullet$ | - |  |
| Stalisitis | Random mumbers | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
|  | Rantom integeis | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Listhaseded SAAd dala eilitr | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | - | - | - |
|  | Standard devidition | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Regerssion analys | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | - |
|  | Linear regression | $\bullet$ | $\bullet$ | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  | $\bullet$ |  |
|  | $a b$ Exponential regression Advanced statistics | $\bullet$ | $\bullet$ | - | - | - | - | - | - | - | - | - | - |
|  | Other erepessions |  |  | Loo, Exp,Pw, Inv, Cuad | $\begin{gathered} \text { cog.Exp. Pur, } \\ \text { nive, vard } \end{gathered}$ |  |  |  |  | Loo, Exp, Puw, Inv, Ouad |  | - | - |
| Finame | Finamial luntion | - | - | - | - | - | - | - | - | - | - | - | - |
| Spreastieet | Spreastiseet | - | - | - | - | - | - | - | - | - | - | - | - |
| Others | eactivity | - | - | S-v.P.A.M. | S-V.P.. . | S-V.P.A.M. | S-V.P.A.M. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | memoy (79 | menoy 179 | menory 179 | menory 179 | V.P.A.M. | - |
|  |  |  |  |  |  |  |  | distitution | distribution | distribution | distitution |  |  |

A full lineup of easy-to-use models to meet a variety of different needs.
CASID's unique value added calculators Designed for good looks!


GASIO's unique value added calculators Designed for peak performance!




Mini desk type WM-220T [iflowe WM-200T ifllour

$$
-
$$

MC-100 ©


Cost, Selling Price and Margin Calculations For Shopkeepers \& Traders




Mini desk type
MS-310TM (itlone











## Durable and easy to use: HEAVY DUTY Calculators

## D Desk-Top Type



Compact Desk Type


JS-120TV


JS-40V 14 |latrs

What makes a CASIO "HEAVY DUTY Calculators"?

| TWP (Two-Way Power) |  | Heav-duty Durable Keys |
| :---: | :---: | :---: |
|  |  |  |
| Function Command Signs | 123455niogn in |  |
| (e) |  |  |
|  |  | Key Layout and Key Gap Shape |
| $\text { in it it } 10$ |  |  |
|  |  | 0 |
| $\begin{aligned} & \text { Extra Big Display } \\ & \hline \text { Larger display makes more data easier } \\ & \text { to read. } \end{aligned}$ |  | Slient Touch Keys |
| $\square^{\text {P }}$ |  |  |
|  |  | previous CASIO calculators to h <br> maintain a more pleasant worki |
|  | Large Rubber Feet |  |
|  | Latas ruber fer | Key Rollover |
|  |  | Key operations ares stored in a so nofing is Sose ten during |

[^0]









Mini Desk Type



MS-270TV
MS-170TV



MS-7TV ©



LC-1000TV 1 ITDINars


LC-403TV © Blonars $^{2}$


LC-401LV 8 (blorrs


| \|c|en | casio |
| :---: | :---: |
| 成 | Fizu |
| Koy few | \% |
|  |  |
| 낭) | 잦8 |
|  | c456 |
|  | (11) $3^{3}$ |
|  | 00. |

SL-340VA 14 |lowrs


SL-320TV SL-315TV


SL-300TV Blolarrs


LL-300LV ©


Portable Type


SL-797TV ©


SL-787TV ©



HL-820VA ©

HL-815L Bloliars

HL-4A ©



## Gompact Desk type





MX-12V (italoars


| Mod | Digits | $\begin{gathered} \text { Independent } \\ \text { memory } \end{gathered}$ | Gt | \% | mu | $\square$ | +- | ■ |  | 5/4 | Cut | Up | Decimal selector | ${ }_{\substack{\text { apd } \\ \text { mode }}}$ | Power supply | $\underset{H \times W \times D(\mathrm{~mm})}{\substack{\text { Dimensions }}}$ | $\left\lvert\, \begin{array}{\|c\|c\|c\|c\|c\|c\|c\|c\|c\|l\|c\|c\|}  \\ \text { weight (9) } \end{array}\right.$ | Case |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AX-1207V | 12 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0,1,2,4 | $\bigcirc$ | Two-way power | $26.1 \times 107 \times 17.5$ | 170 | - |
| AX-120V | 12 | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | 0,1,2,4 | $\bigcirc$ | Twoway power | $29.3 \times 107 \times 175.5$ | 165 | - |
| AX-12V | 12 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0,1,2,4 | $\bigcirc$ | Two-way power | ${ }^{255 \times 107 \times 176}$ | 145 | - |
| mx-120V | 12 | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | - | - | - | - | Two-way power | $30.7 \times 103 \times 145$ | 120 | - |
| mx-12V | 12 | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | - | - | - | - | Two-way pow | $31.7 \times 103 \times 14$ | 100 | - |
| mx-8v | 8 | $\bigcirc$ | - | 0 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | - | - | - | - | - | - | Two-way power | $31.7 \times 103 \times 145$ | 100 | - |
| sx-320P | 12 | $\bigcirc$ | - | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | - | - | - | - | Two-way power | $7.5 \times 7 \times \times 18.5$ | 50 | Walle |
| sx-300 | 8 | $\bigcirc$ | - | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | - | - | - | - | - | Twoway power | $7.5 \times 7 \times \times 118.5$ | 50 | Wallet |
| sx-300 | 8 | $\bigcirc$ | - | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | - | - | - | - | - | Two-way power | $7.5 \times 7 \times \times 118.5$ | 50 | Wallet |
| Sx-220 | 12 | $\bigcirc$ | $\bigcirc$ | 0 | - | 0 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | - | - | - | - | Twoway power | (12.5x120 ${ }^{1 / 23}$ | 80 | - |
| SX-100 | 8 | $\bigcirc$ | - |  |  |  |  |  | $\bigcirc$ | - | - |  |  |  | Twoway power |  | 55 |  |




HR-100TM Cit parars





## Main Functions

Cost, Selling Price and Margin Calculations (HR-8TM/HR-100TM/HR-150TM/DR-120TM/
DR-140TM/RR-210TM/RR-240TM/DR-270TM) Perform the operations shown to the right calculate cost, selling price, and margin. Exchange Functions
(HR-8TM/HR-10TM/HR-150TM)
Current ratest for convering between U.S. dollars
and and up to three national currencices at the touch or
a key. A simple aperation also converts between national currencies, with intermediate conversion
no U . dollars.
Tax Calculations (All modeds) Set the rate you want tor easy yalculation of amount
plus tax, amount less tax, and tax mount.


DR-240TM

## Printing Sample


What is the cost of a n iten that sells tor
$\$ 150$ aterer $300 \%$ maraji is is added?

- C CR150 (still ${ }^{15}$
(2) 30 ITAR $\quad 105$.
(3)

| Se |  |
| :---: | :---: |
| What wolld the sellif |  |
| - CCA120 |  |

 \begin{tabular}{lll}
1,0 <br>
\hline

 

1000 <br>
\hline
\end{tabular}


















 | Writh | 24 mm | 18 mm | 12 mm | 9 mm | 6 mm |
| :--- | :--- | :--- | :--- | :--- | :--- |
| BACK |  |  |  |  |  |

 | BLLCCK on CLEAR | XR－24X1 | XR－18X1 | XR－12X1 | XR－9X1 | XR－6X1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BLLCK on RED | XR－24RD1 | XR－18RD1 | XR－12RD1 | XR－9RD1 | XR－6RD1 |

 BLACK on BLUE XR－248U1 XR－18BU1 XR－12BU1 $1 \times$
 BLACK on GOLD $\quad$－XR－18G01 XR－12601 XR－9G01 BLACK on SLLVER $\quad-\quad$ XR－18SR1 1 XR－12SR1 1 XR－9SR1 $\quad-$
 RED on WHITE XX－18WER1 Xf－12WER1 Xf－．WWER1 BBLACK INK XR－118BK1 BLUE on WHITE XR－18WEB1 XR－22WEB1 XP－．WWEB1

## Chocolates

 England vs．Brazil

## Andy

Household＿accounts


Handy home model for organizing your home！

（115）
KL－120


The portable，easy－to－use Chinese label printer



## Handles $18,12,9$ and 6 mm tape widths．

－12mm print head／200dpi resolution
Prints up to 2 lines（ 18 or 12 mm tape）．
Print preview
$\square 3$ character effects $\underset{\text { Shading }}{\text { A }} \underset{\text { Undefine }}{\text { A }} \underset{\text { Box }}{ }$
$\square$ 4－digit， 1 －line LCD
$\square$ Handles 12,9 and 6 mm tape widths．
5 mm print head／160 dpi resolution
$\square$ Prints up to 2 lines（ 12 or 9 mm tapes）
$\square 3$ character effects

Five Chinese input methods
Beijing Pin－yin，Canton Pin－yin，Zhu－yin，Chang－ji，Simplified Chang－ji
Chinese and English fonts built in

4－digit， 1 －line LCD
Supports label tape size： $18 \mathrm{~mm} / 12 \mathrm{~mm} / 9 \mathrm{~mm} / 6 \mathrm{~mm}$
Prints up to 2 lines on a single label
6 character sizes
美 美 美 美 美 美
212 special characters built in


## function SYMBols

| 763 | Number of functions |  |  | List based STAT－data editor <br> Viewing and editing of input data in list format，showing data urrounding data． | 韫 | Data communication with a personal computer |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NATURA V．P．A．M | NATURAL TEXTBOO | Natural V．P．A．M．display Natural textbook display Display expression same as textbo | $\begin{gathered} \text { Meltirivy } \\ \text { repiay } \end{gathered}$ | Multi－replay <br> Quick and easy recall of previously executed formulas for editing and re－execution． | （8EST | Best view Larger dispay |
|  | S－V．P．A．M． <br> （Super Visually Perfect Algebraic Method） All the features of the existing V．P．A．M．series plus a new 2 －line display and a useful Replay function．All this helps to make mathematics easier to use and easier to understand than ever before |  | $\begin{aligned} & 10+2 \\ & 010+2 \pi s \end{aligned}$ | $10+2$ digits <br> 10－digit mantissa + 2－digit exponential dis |  | Super solar |
|  |  |  | LCD | Colour display <br> s for quick and comprehension |  |  |
|  | V．P．A．M． <br> （Visually Perfect Algebraic Method） <br> Cacuuations exactly as they are witten．Calculation <br> help make calculations easier． |  |  | Icon men |  |  |
|  |  |  | ${ }_{\text {matax }}^{\text {DOT }}$ | Dot matrix display High－resolution scre graphs every time． |  | Profit margin percent <br> \％key gives quick access to prices and profits，and also delivers add－ons，discounts，ratios，inc decrease values and regular percentages |
| ${ }_{\text {data }}^{\text {drat }}$ | STAT－data editor <br> Back－step viewing and editing of input data． |  | $\substack{\begin{subarray}{c}{\text { miog } \\ \text { now } \\ \text { now }} }} \\ {\hline} \end{subarray}$ | Two－way power（Solar＋Battery） Solar powered in sunlight，battery powered when lighting is low． | $\stackrel{\times}{\times 1}+$ | Function command signs <br> A symbol $(+,-, \times, \div)$ on the display indicates the type of operation you are currently performing <br> performing |


| Practical Calculator／Printing Calculato |  |  |  |  |  | Mark－up／Mark－down |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | Extra big display <br> Larger display makes more data easier to read |  | Tax \＆exchange function Tax calculation and currency conversion functions |  |  | dine for simplifec cost and |
|  |  |  |  | （e） | per command signs |  |
|  | Big |  | Tax calculation <br> Automatic calculation of price plus ax，price less tax， margin amount price，tax amount，discount amount，and margin amount |  |  |  |
|  |  |  |  |  | Function command signs of operation you are currently performing |  |
| EES | Best view <br> reduce fatigue from work | TILST | Tilt Disp | 文〉－ |  |  |
| （n） | Two－way power（Solar＋Battery） Solar powered when light is sufficient，battery powered when light is insufficient |  |  |  | ck \＆Calendar |  |
|  |  |  | Day／Date calculation <br> Day／Date calculations allow easy input and calculation <br> of duration or date |  | 120 steps check <br> Displays up to 120 previous calculation steps． |  |
| cose | Super solar Solar cell powers calculations even when lighting is relatively dim． |  |  |  |  |  |
|  |  |  | Time calculation <br> hour，minute，and second va calculation of hour，minute，and second values． |  | Line printing <br> Line printing for higher speed，superior print quality <br> d quieter operation |  |
|  | Key rol |  |  |  |  |  |
|  | lost even during high－speed inpu |  | Metric conversion function measurement unit． | 20 | 2－colour printing <br> Positive values are shown in black，and negative for easy checking． |  |
|  | Plastic Keys Designed andengineered tor easy operation |  |  | Prin |  |  |
| Mealar | Durable metal cover <br> Tough cover stands up to rough treatment |  | Profit margin percent <br> \％key gives quick access to prices and profits，and decrease values． | 3.5 | 3.5 line－per－second printing The value indicates the number of lines printed per second． |  |
| $\begin{gathered} \text { cost } \\ \substack{\text { Sest } \\ \text { MAB } \\ \hline} \\ \hline \end{gathered}$ | Cost／Sell／Margin <br> Calculate the cost，selling price，or margin of profit <br> on an item，given the other two values | \％ | Regular percent Regular perenentage aluluaions． | $\mathbb{N}$ |  | －duty durable keys <br> Key markings ar wear or fade with use |


| X |  |  | Red numbers indicate new models． |  |
| :---: | :---: | :---: | :---: | :---: |
| Model Page | Model Page | Model Page | Model Page | Model Page |
| A ALGEBRA AA－－12VV． AA． 20 Viv． AX－ 120 V ． <br> C <br>  |  |  |  $\begin{array}{r}18 \\ 18 \\ 18 \\ 18 \\ 18 \\ 18 \\ \hline\end{array}$ <br>  <br> $\stackrel{N}{N S}$ $\qquad$ 17 <br> 0 <br> OH－ALGEBRA FX 2.0 SET ．．．． 9 OH－ClassPad 330 SET |  |

SALES PROMOTION MATERIALS，
NEWSPAPER／MAGAZINE ADVERTISEMENT AND ACTIVITIES


| Scientific Calculator Artwork | Financial Consultant Artwork |
| :--- | :--- |



Printing Calculator Artwork



MS Series


ES Series



For information about Accessories and Options of Calculators models, visit http://www.casio-intl.com/calc/

## $\square \Delta \square \square$

CASIO COMPUTER CO., LTD.


[^0]:    
    
    
    

