Reserved Variables on the HP Prime

These are Prime's reserved variables in alphabetical order.
N.B. All variables on Prime are case sensitive.

The "App specifier" is needed only for accessing an app variable when that app is not the current app.
The syntax for accessing an app var outside of its app is "prefix.varname".
For example, if the Solve app is NOT the current app, then its "Xmin" variable is called "Solve.Xmin".
But if the Solve app IS the current app, then you may omit the prefix and just call it "Xmin".
Programs which should work no matter which app is the current app should always use app specifiers for app variables.
Some vars have no app specifiers (global vars, system/settings vars, and CAS pseudo-vars).

Do not use variations on PPL command names as variables,
e.g. "To" (which is like the PPL command "TO");
this can cause unexpected results.

Please send corrigenda to Joe Horn at **<mail@frjoe.us>**. Thanks in advance.

Variable Name	Description	App specifier	Help
Θ	global real		
Θmax	app Plot var	Polar	Θmax contains the final value for Θ in Polar app Plot view. **Θmax := n**, where n is a real number such that n>Θmin
Θmin	app Plot var	Polar	Θmin contains the starting value for Θ in Polar app Plot view. **Θmin := n**, where n is a real number
Θstep	app Plot var	Polar	Θstep contains the stepping value (increment) of Θ in Polar app Plot view. **Θstep := n**, where n is a real number such that n>0
μ_0	app Numeric var	Inference	Sets the assumed value of the population mean for a hypothesis test. **n ► μ_0** sets the value of μ_0 to n.
π_0	app Numeric var	Inference	Sets the assumed proportion of successes for the one-proportion Z-test. **n ► π_0** sets the value of π_0 to n.
σ_1	app Numeric var	Inference	Sets the population standard deviation for a hypothesis test or confidence interval involving 1 or 2 means and the Normal distribution. For a test or interval involving the difference of two means, sets the population standard deviation of the first sample. **n ► σ_1** sets the value of σ_1 to n.
σ_2	app Numeric var	Inference	For a test or interval involving the difference of two means and the Normal distribution, sets the population standard deviation of the second sample. **n ► σ_2** sets the value of σ_2 to n.
σCov	app Results var	Statistics_2Var	σCov contains the population covariance of the current 2-variable statistical analysis (S1-S5).
ΣX	app Results var	Statistics_1Var / Statistics_2Var	*Statistics_1Var:* The sum of the data set in the current 1-variable analysis (H1-H5). *Statistics_2Var:* The sum of the independent values (X) of the current 2-variable statistical analysis (S1-S5).
σX	app Results var	Statistics_1Var / Statistics_2Var	*Statistics_1Var:* The population standard deviation of the data set in the current 1-variable analysis (H1-H5). *Statistics_2Var:* The population standard deviation of the independent values (X) of the current 2-variable statistical analysis (S1-S5).
ΣX2	app Results var	Statistics_1Var / Statistics_2Var	*Statistics_1Var:* The sum of the squares of the data set in the current 1-variable analysis (H1-H5). *Statistics_2Var:* The sum of the squares of the independent values (X) of the current 2-variable statistical analysis (S1-S5).
ΣXY	app Results var	Statistics_2Var	ΣXY contains the sum of the X·Y products for the current 2-variable statistical analysis (S1-S5).
ΣY	app Results var	Statistics_2Var	ΣY contains the sum of the dependent values (Y) of the current 2-variable statistical analysis (S1-S5).
σY	app Results var	Statistics_2Var	σY contains the population standard deviation of the dependent values (Y) of the current 2-variable statistical analysis (S1-S5).
ΣY2	app Results var	Statistics_2Var	ΣY2 contains the sum of the squares of the dependent values (Y) of the current 2-variable statistical analysis (S1-S5).
A	global real		
AAngle	app Modes var	(all apps)	AAngle sets the angle mode to Degrees, Radians, or System, for the app. **AAngle := 0** use Home view setting **AAngle := 1** for Radians **AAngle := 2** for Degrees **AAngle := 3** for Gradians
Accrued	app Bond var	Finance	Accrued - The accrued interest of a bond. **Accrued:=n** sets the value of Accrued to n
AComplex	app Modes var	(all apps)	AComplex sets the complex number mode for the app. **AComplex := 0** use Home view setting

			AComplex := 1 for ON **AComplex := 2** for OFF
ADigits	app Modes var	(all apps)	ADigits sets the number of decimal places to use for the number format. **ADigits := n**, where n is an integer such that 0≤n≤11
AFiles	app Modes var	(all apps)	Each HP Prime app can have any number of files associated with it. These files are sent with the app. **AFiles** returns the list of all these files. **AFiles("name")** returns the content of the file with the given name. **AFiles("name"):= object** stores the object in the file with the given name.
AFilesB	app Modes var	(all apps)	Each HP Prime app can have any number of files associated with it. These files are sent with the app. AFilesB is the binary equivalent of the AFiles variable. **AFilesB** returns the list of all files associated with an app. **AFilesB("name")** returns the size of the file with the given name. **AFilesB("name", position, [nb])** returns nb bytes read from the file with the given name, starting from position in the file (position starts at 0). **AFilesB("name", position):= value or { values...}** stores n bytes, starting at position, in the file with the given name.
AFormat	app Modes var	(all apps)	AFormat defines the format of the number display for the app. **AFormat := 0** use Home view setting **AFormat := 1** for Standard **AFormat := 2** for Fixed **AFormat := 3** for Scientific **AFormat := 4** for Engineering **AFormat := 5** for Floating **AFormat := 6** for Rounded
Alpha	app Numeric var	Inference	Sets the alpha level for the hypothesis test. **Alpha:=n**, where 0<n<1, sets the alpha-level to n.
AltHyp	app Symbolic var	Inference	AltHyp determines the alternative hypothesis used for hypothesis testing. **AltHyp := 0** for μ<μ0 **AltHyp := 1** for μ>μ0 **AltHyp := 2** for μ≠μ0
AngleA	app Numeric var	Triangle_Solver	AngleA - The measure of angle A. The value of this variable will be interpreted according to the angle mode setting (Degrees or Radians). **n ► AngleA**, where n>0, sets the value of AngleA to n.
AngleB	app Numeric var	Triangle_Solver	AngleB - The measure of angle B. The value of this variable will be interpreted according to the angle mode setting (Degrees or Radians). **n ► AngleB**, where n>0, sets the value of AngleB to n.
AngleC	app Numeric var	Triangle_Solver	AngleC - The measure of angle C. The value of this variable will be interpreted according to the angle mode setting (Degrees or Radians). **n ► AngleC**, where n>0, sets the value of AngleC to n.
ANote	app Modes var	(all apps)	ANote returns the note associated with an HP app. This is the note displayed when the user presses Shift Apps (Info). **ANote:="string"** sets the note associated with the app to contain the string.
AProgram	app Modes var	(all apps)	AProgram returns the program associated with an HP Prime app. **AProgram:="string"** sets the program associated with the app to contain the string.
AVars	app Modes var	(all apps)	AVars returns the list of the names of all the variables associated with an HP Prime app. **AVars(n)** returns the content of the nth variable associated with the app. **AVars("name")** returns the content of the specified variable associated with the app. **AVars(n or "name"):= value** sets the specified app variable to contain the given value. If "name" is not an existing variable, creates a new one. Note that once an app variable is created through **AVars("name"):= value**, you can use the variable by simply typing the variable name.
Axes	app Plot var	Function / Explorer / Solve / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Geometry / Inference	Turns the display of X and Y axes in Plot View on or off. **Axes := 0** axes on. (default) **Axes := 1** axes off.
B	global real		
Base	Home Settings		Returns or sets the integer base format. **Base := 0** for binary **Base := 1** for octal **Base := 2** for decimal **Base := 3** for hexadecimal (default)
BEG	app TVM var	Finance	BEG - Determines whether interest is compounded at the beginning or end of the compounding period. **0 ► BEG** for compounding at the end of the period (default) **1 ► BEG** for compounding at the beginning of the period
Bits	Home Settings		Returns or sets the integer bit size. **Bits := x**, where 1≤x≤64

Bond360	app Bond var	Finance	Bond360 stores whether to use an actual or a 360-day calendar when doing a Bond calculation. **Bond360 := 0** for actual 365-day year **Bond360 := 1** for 360-day year
BoxAxes	app Plot var	Graph_3D	???
BoxDots	app Plot var	Graph_3D	???
BoxFrame	app Plot var	Graph_3D	???
BoxLines	app Plot var	Graph_3D	???
BoxScale	app Plot var	Graph_3D	???
BoxSides	app Plot var	Graph_3D	???
BSCall	app Black-Scholes var	Finance	BSCall stores the call price of an option in a Black-Scholes calculation. **n ► BSCall** sets the value of BSCall to n
BSPut	app Black-Scholes var	Finance	BSPut stores the put price of an option in a Black-Scholes calculation. **n ► BSPut** sets the value of BSPut to n
C	global real		
C0-C9	app Numeric var	Statistics_2Var	(See the Statistics 2Var app's Numeric View screen)
CallPrice	app Bond var	Finance	CallPrice stores the call price or value when doing a Bond calculation. **n ► CallPrice** sets the value of CallPrice to n
Cell	app Numeric var	Spreadsheet	Syntax: **Cell(RowNumber, ColNumber, [n])** [Cell's Help screen is too large to copy here. See it for more information.]
CellName	app Numeric var	Spreadsheet	**CellName** returns the list of all the named cells in the spreadsheet **CellName("name")** returns a list with the row and column of the named cell if it exists. Else returns 0. Examples: **CellName** → { "name1", "name2"...} **CellName("name")** → { row, column }
CFData	app Cash flow var	Finance	Provides access to the financial cash flow data. **CFData** is a list of lists. Each sub list contains 2 items - the cash flow value and count. **CFData(n)** will access the nth item in the list.
CFPYR	app Cash flow var	Finance	CFPYR contains the cash flows per year. **n ► CFPYR**, where n is an integer < 1, sets the value of CFPYR to n
Change	app Percent change var	Finance	Change stores the percent change in percent-change calculations. **n ► Change** sets the value of Change to n
CoefDet	app Results var	Statistics_2Var	CoefDet contains the coefficient of determination from the latest calculation of summary statistics. This value is based on the fit type chosen.
coefDet	app Results var	Inference	coefDet contains the value of the coefficient of determination from the last linear regression t-test.
Col	app Numeric var	Spreadsheet	Col is a variable that indicates currently calculated cell column number (A=1, B=2, etc.). This is mostly used when creating generic expression that need to work anywhere in the spreadsheet or for rows or full spreadsheet expressions. **Example steps:** 1. Tap on the upper left corner of the spreadsheet (where the HP logo is) to select the entire spreadsheet 2. Type **=COMB(Row-1,Col-1)** 3. Tap the OK menu button The spreadsheet will now be filled with Pascal's triangle.
ColWidth	app Numeric var	Spreadsheet	**ColWidth(Integer)** allows you to set and get the width of columns. **Integer1 ► ColWidth(Integer2)** sets the width of column Integer2 (A=1, B=2, etc.) to Integer1 pixels. Here, both Integer1 and Integer2 are positive. If Integer2 is not specified, sets the default width for columns in the spreadsheet to Integer1 pixels. **ColWidth(Integer)** returns the width of the column specified by Integer (A=1, B=2, etc.). You can also set the column width from the Format menu.
Conf	app Numeric var	Inference	Sets the confidence level for the confidence interval. **Conf:=n**, where 0<n<1, sets the confidence level to n.
Connect	app Plot var	Statistics_2Var	[JKH's guess: **Connect:=0** plots scatter points without connecting them (default). **Connect:=1** connects scatter points when plotting.]
ContribList	app Results var	Inference	ContribList is a list that contains the Chi-Square contributions for the last Chi-Square goodness of fit (GoF) test.
ContribMat	app Results var	Inference	ContribMat is a matrix that contains the Chi-Square contributions for the last Chi-Square 2-way test.
Corr	app Results var	Statistics_2Var	Corr contains the correlation coefficient from the latest calculation of summary statistics.
corr	app Results var	Inference	corr contains the value of the correlation from the last linear regression t-test.
Cost	app Percent change var	Finance	Cost stores the cost of an item in markup calculations. **n ► Cost** sets the value of Cost to n

CostAsset	app Depreciation var	Finance	CostAsset stores the depreciable cost of an asset at time of purchase when doing a Depreciation calculation. **n ► CostAsset**, where n>0, sets the value of CostAsset to n
CpnPer	app Bond var	Finance	CpnPer stores the coupon percentage when doing a Bond calculation. **n ► CpnPer** sets the value of CpnPer to n
CPYR	app TVM var	Finance	CPYR - The number of compounding periods per year for an investment or loan. The default value is 12. **n ► CPYR**, where n>0, sets the value of CPYR to n.
CritScore	app Results var	Inference	CritScore contains the value of the Z- or t-distribution associated with the input α-value
CritVal1	app Results var	Inference	CritVal1 contains the lower critical value of the experimental variable associated with the negative TestScore value which was calculated from the input α-level.
CritVal2	app Results var	Inference	CritVal2 contains the upper critical value of the experimental variable associated with the positive TestScore value which was calculated from the input α-level.
Cursor	app Numeric var	Spreadsheet	**Cursor** returns a list representing the cursor position and selection stop location. Example: **Cursor** → {row, col, [selectionRow, SelectionCol]} **Cursor(n)** returns the nth object of the list that Cursor would have returned. **Cursor:= {row, col, [selectionRow, selectionCol]}** sets the cursor position. If a selection is specified when setting Cursor, then the selection is activated else it is deactivated.
Cursor	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Inference / Graph_3D	Cursor sets the cursor type in Plot view. **Cursor := 0** normal (default) **Cursor := 1** inverted **Cursor := 2** blinking
D	global real		
D0-D9	app Numeric var	Statistics_1Var	(See the Statistics 1Var app's Numeric View screen)
DataType	app Symbolic var	Inference	For the Chi-Square goodness of fit (GoF) test, DataType determines whether the expected list contains probabilities or counts. **DataType:= 0** for count data **DataType:= 1** for probabilities
Date	Home System		**Date** returns the system date in YYYY.MMDD format. **Date := YYYY.MMDD** changes the date.
Date360	app Date calculation var	Finance	Date360 stores whether to use an actual or a 360-day year when doing a date calculation. **Date360 := 0** for actual 365-day year **Date360 := 1** for 360-day year
DateDiff	app Date calculation var	Finance	DateDiff stores the difference between the two dates in a date calculation. **n ► DateDiff**, where n>0, sets the value of DateDiff to n
DateOne	app Date calculation var	Finance	DateOne stores the first date used in a date calculation. Use the format YYYY.MMDD **n ► DateOne**, where n is YYYY.MMDD, sets the value of DateOne to n
DateTwo	app Date calculation var	Finance	DateTwo stores the second date used in a date calculation. Use the format YYYY.MMDD **n ► DateTwo**, where n is YYYY.MMDD, sets the value of DateTwo to n
DelAFiles	app Modes var	(all apps)	**DelAFiles("name")** Deletes the specified file associated with an HP app.
DelAVars	app Modes var	(all apps)	**DelAVars(n)** or **DelAVars("name")** erases the specified app variable.
DelHVars	Home System		**DelHVars(n)** or **DelHVars("name")** deletes the specified home user variable.
DF	app Results var	Inference	DF contains the degrees of freedom for the t-tests.
DFerr	app Results var	Inference	DFerr contains the value of the degrees of freedom of the errors from the last ANOVA 1-way calculation.
Digits	CAS Settings	Note: Not really a variable, but it acts like one in CAS.	???
Dividend	app Black-Scholes var	Finance	Dividend stores the dividend percentage in a Black-Scholes calculation. **n ► Dividend** sets the value of Dividend to n
E	global real		
E0-E9	app Symbolic var	Solve	(See the Solve app's Symbolic View screen)
EffInt	app Interest conversion var	Finance	EffInt stores the effective interest rate when doing an Interest Conversion calculation. **n ► EffInt**, where 0≤n≤100, sets the value of EffInt to n.
Entry	Home Settings		Returns or sets the entry mode. **Entry := 0** for Textbook (default) **Entry := 1** for Algebraic **Entry := 2** for RPN
epsilon	CAS Settings	Note: Not really a variable, but it acts like one in CAS.	[JKH's guess: Values < epsilon are treated as zero by CAS. Also controls how 'exact' works.]
ExpList	app Numeric var	Inference	ExpList is a list that contains the expected counts for each category from the last Chi-Square goodness of fit (GoF) test.
ExpMat	app Results var	Inference	ExpMat is a matrix that contains the expected count data from the last Chi-Square 2-

			Way test calculation.
Extremum	app Results var	Function	Extremum contains the last value found by either the Extremum function in the Plot view Fcn menu or calculated using the EXTREMUM app function.
F	global real		
F0-F9	app Symbolic var	Function	(See the Function app's Symbolic View screen)
FactorDepr	app Depreciation var	Finance	FactorDepr stores the depreciation factor as a percentage when doing a Depreciation calculation when using a declining balance method. **n ► FactorDepr**, where n>0, sets the value of FactorDepr to n
FinType	app Symbolic var	Finance	FinType determines the type of calculation for depreciation or percent calculations. With Method=4 for depreciation, the constant values and their meanings are as follows: **FinType:= 0** for straight line **FinType:= 1** for sum-of-the-years digits **FinType:= 2** for declining balance **FinType:= 3** for declining balance with crossover **FinType:= 4** for French straight line **FinType:= 5** for French amortization With Method=6 for percent calculations, the constant values and their meanings are as follows: **FinType:= 0** for margin/markup **FinType:= 1** for percent/change
FirstAsset	app Depreciation var	Finance	FirstAsset stores the first use when doing a Depreciation calculation. Normally, this will be 1. **n ► FirstAsset**, where n≥1, sets the value of FirstAsset to n
Fit	app Plot var	Statistics_2Var	[JKH's guess: **Fit:=0** plot the data without the fit curve (default). **Fit:=1** plot the data AND the fit curve.]
FixedCost	app Break even var	Finance	FixedCost stores the fixed cost of developing and marketing a product within a Break-even calculation. **n ► FixedCost**, where n>0, sets the value of FixedCost to n.
FMRR	app Cash flow var	Finance	FMRR stores Financial Management Rate of Return when a Cash Flow calculation is performed.
FV	app TVM var	Finance	FV - The future value of an investment or loan. **n ► FV** sets the value of FV to n.
Fval	app Results var	Inference	Fval contains the value of the mean squares for the treatments from the last ANOVA 1-way calculation.
FZ0-FZ9	app Symbolic var	Graph_3D	???
G	global real		
G0-G9	global graphics		
GridDots	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Geometry / Inference	GridDots turns the background grid dots in Plot View on or off. **GridDots := 0** grid dots on. (default) **GridDots := 1** grid dots off.
GridLines	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Inference	GridLines turns the background grid lines in Plot View on or off. **GridLines := 0** grid lines on. (default) **GridLines := 1** grid lines off.
GridX	app Plot var	Graph_3D	???
GridY	app Plot var	Graph_3D	???
GSize	app TVM var	Finance	GSize - The size of each group for the amortization table. The default value is 12. **n ► GSize**, where n>0, sets the value of GSize to n.
H	global real		
H1-H5	app Symbolic var	Statistics_1Var	(See the Statistics 1Var app's Symbolic View screen)
HAngle	Home Settings		The Home variable HAngle is used to set the Home view angle mode. **HAngle := 0** for Radians (default) **HAngle := 1** for Degrees **HAngle := 2** for Gradians
HComplex	Home Settings		[HComplex's Help screen is too long to copy here. Refer to it for details.]
HDigits	Home Settings		The Home variable HDigits controls the number of digits displayed after the decimal point when the number format is not Standard. **HDigits := n**, where n is an integer such that 0 ≤ n ≤ 11.
HFormat	Home Settings		The Home variable HFormat controls how numbers are displayed in Home view. This variable may contain any integer from 0 through 5, each value having the following meaning: **HFormat :=0** for Standard **HFormat :=1** for Fixed **HFormat :=2** for Scientific **HFormat :=3** for Engineering **HFormat :=4** for Floating **HFormat :=5** for Rounded

Hmax	app Plot var	Statistics_1Var / Inference	*Statistics_1Var:* Maximum value to be included in the histogram. *Inference:* ???
Hmin	app Plot var	Statistics_1Var / Inference	*Statistics_1Var:* Minimum value to be included in the histogram. *Inference:* ???
HSeparator	Home Settings		The Home variable HSeparator is used to control the separators used in number display. HSeparator may contain any integer from 0 through 10 corresponding to the choices in the home setting screen.
HVars	Home System		[The Help screen for HVars is too long to copy here. Refer to it for details.]
Hwidth	app Plot var	Statistics_1Var / Inference	*Statistics_1Var:* Width of a histogram bar (bin width). *Inference:* ???
I	global real		
I1-I4	app Numeric var	Inference	???
ImageDisplay	app Plot var	Function / Solve / Statistics_1Var / Statistics_2Var / Inference / Parametric / Polar / Sequence / Advanced_Graphing / Geometry / Graph_3D	ImageDisplay controls how a background image is displayed 0 for no background 1 for centered 2 for stretched 3 for best fit 4 for XY range ImageName controls which image is used
ImageName	app Plot var	Function / Solve / Statistics_1Var / Statistics_2Var / Inference / Parametric / Polar / Sequence / Advanced_Graphing / Geometry / Graph_3D	ImageName controls which image is set as a background in plot views. **ImageName := name**, where name is a file name string (such as "photo1").
ImageOpacity	app Plot var	Function / Solve / Statistics_1Var / Statistics_2Var / Inference / Parametric / Polar / Sequence / Advanced_Graphing / Geometry / Graph_3D	ImageOpacity controls the opacity of the background image, if present. Use 100 for an unmodified image and smaller values for less opacity (more transparency) in the image. **ImageOpacity := n**, where n is a real number between 0 and 100.
ImageXmax	app Plot var	Function / Solve / Statistics_1Var / Statistics_2Var / Inference / Parametric / Polar / Sequence / Advanced_Graphing / Geometry	ImageXmax sets the maximum horizontal value occupied by the background image, if present. **ImageXmax := n**, where n is a real number.
ImageXmin	app Plot var	Function / Solve / Statistics_1Var / Statistics_2Var / Inference / Parametric / Polar / Sequence / Advanced_Graphing / Geometry	ImageXmin sets the minimum horizontal value occupied by the background image, if present. **ImageXmin := n**, where n is a real number.
ImageYmax	app Plot var	Function / Solve / Statistics_1Var / Statistics_2Var / Inference / Parametric / Polar / Sequence / Advanced_Graphing / Geometry	ImageYmax sets the maximum vertical value occupied by the background image, if present. **ImageYmax := n**, where n is a real number.
ImageYmin	app Plot var	Function / Solve / Statistics_1Var / Statistics_2Var / Inference / Parametric / Polar / Sequence / Advanced_Graphing / Geometry	ImageYmin sets the minimum vertical value occupied by the background image, if present. **ImageYmin := n**, where n is a real number.
InfType	app Symbolic var	Inference	InfType determines the type of hypothesis test, confidence interval, Chi-Square test, or inference for regression calculation. Their function depends upon the value of the variable Method. [InfType's Help screen is too large to copy here. See it for more information.]
IntCPYR	app Interest conversion var	Finance	IntCPYR stores the number of interest compounds per year when doing an Interest Conversion calculation. **n ► IntCPYR**, where n>0, sets the value of IntCPYR to n.
Inter	app Results var	Inference	Inter contains the value of the intercept from the last linear regression t-test.
InvestInt	app Cash flow var	Finance	InvestInt contains the cash flow investment interest rate. **n ► InvestInt**, where 0≤n≤100, sets the value of InvestInt to n
IPYR	app TVM var	Finance	IPYR - The interest rate per year of an investment or loan. **n ► IPYR** sets the value of IPYR to n.
IRR	app Cash flow var	Finance	IRR stores the Internal Rate of Return when doing a Cash Flow equation.
Isect	app Results var	Function	Isect contains the last value found either by the Intersection function in the Plot view Fcn menu or calculated using the ISECT app function.
J	global real		
K	global real		
KeyAxes	app Plot var	Graph_3D	???
L	global real		
L0-L9	global list		
Labels	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Geometry / Inference / Graph_3D	Labels enables or disables drawing labels in Plot view showing X and Y ranges. **Labels := 0** labels off (default) **Labels := 1** labels on

Language	Home System		The Home variable Language controls which language is used in Home view. **Language:= 1** for English (Default) **Language:= 2** for Chinese **Language:= 3** for French **Language:= 4** for German **Language:= 5** for Spanish **Language:= 6** for Dutch **Language:= 7** for Portuguese **Language:= 8** for Japanese
LifeAsset	app Depreciation var	Finance	LifeAsset stores the expected lifetime of a product when doing a Depreciation calculation. **n ► LifeAsset**, where n≥1, sets the value of LifeAsset to n.
LSolution	app Numeric var	Linear_Solver	Contains a vector with the last solution found by either the Linear Solver app or the LSolve app function.
LSystem	app Numeric var	Linear_Solver	Contains a 2x3 or 3x4 matrix which represents a 2x2 or 3x3 linear system. **matrix ► LSystem**, where matrix is either a matrix or the name of one of the matrix variables M0-M9.
M	global real		
M0-M9	global matrix		
Margin	app Percent change var	Finance	Margin stores the margin in markup calculations based on cost. **n ► Margin** sets the value of Margin to n
Markup	app Percent change var	Finance	Markup stores the markup percentage in markup calculations. **n ► Markup** sets the value of Markup to n
MatDate	app Bond var	Finance	MatDate stores the maturity date or call date of a bond when doing a Bond calculation. Dates should be entered as YYYY.MMDD **n ► MatDate**, where n is YYYY.MMDD, sets the value of MatDate to n
MaxVal	app Results var	Statistics_1Var	The maximum value in the current 1-variable analysis (H1-H5).
$Mean_1$	app Numeric var	Inference	Sets the value of the mean of a sample for a 1-mean hypothesis test or confidence interval. For a 2-mean test or interval, sets the value of the mean of the first sample. **n ► $Mean_1$** sets the value of $Mean_1$ to n.
$Mean_2$	app Numeric var	Inference	For a 2-mean test or interval, sets the value of the mean of the second sample. **n ► $Mean_2$** sets the value of $Mean_2$ to n.
MeanX	app Results var	Statistics_1Var / Statistics_2Var	*Statistics_1Var:* The mean of the data set in the current 1-variable analysis (H1-H5). *Statistics_2Var:* The mean of the independent values (X) of the current 2-variable statistical analysis (S1-S5).
MeanY	app Results var	Statistics_2Var	MeanY contains the mean of the dependent values (Y) of the current 2-variable statistical analysis (S1-S5).
MedVal	app Results var	Statistics_1Var	The median in the current 1-variable analysis (H1-H5).
Method	app Plot var	Function / Advanced_Graphing / Statistics_2Var / Parametric / Polar / Solve	Method sets the graphing method: **Method := 0**, Adaptive (default): gives the most accurate results but takes longer to produce the graph **Method := 1**, Fixed-step segments: this method samples x-values, computes their corresponding y-values, and then plots and connects the points. **Method := 2**, Fixed-step dots: this works like the fixed-step segments method but does not connect the points.
Method	app Symbolic var	Inference	Method determines whether the Inference app is set to calculate hypothesis test results, confidence intervals, Chi-Square tests, or inference for regression calculations. **Method := 0** for Hypothesis Tests **Method := 1** for Confidence Intervals **Method := 2** for Chi-Square Tests **Method := 3** for Inference for regression.
Method	app Symbolic var	Finance	Method determines the current calculation type in the Finance app. **Method := 0** for TVM **Method := 1** for interest conversion **Method := 2** for date calculation **Method := 3** for cash flow **Method := 4** for depreciation **Method := 5** for break-even **Method := 6** for percent change **Method := 7** for bond **Method := 8** for Black-Scholes
MinVal	app Results var	Statistics_1Var	The minimum value of the data set in the current 1-variable analysis (H1-H5).
MIRR	app Cash flow var	Finance	MIRR stores Modified Internal Rate of Return when a Cash Flow equation is performed.
MS	app Results var	Inference	MS contains the value of the mean squares for the treatments from the last ANOVA 1-way calculation.
MSerr	app Results var	Inference	MSerr contains the value of the mean squares for the errors from the last ANOVA 1-way calculation.
N	global real		

n_1	app Numeric var	Inference	Sets the size of the sample for a hypothesis test or confidence interval. For a test or interval involving the difference of two means or two proportions, sets the size of the first sample. **n ► n_1** sets the value of n_1 to n.
n_2	app Numeric var	Inference	For a test or interval involving the difference of two means or two proportions, sets the size of the second sample. **n ► n_2** sets the value of n_2 to n.
NbItem	app Results var	Statistics_1Var / Statistics_2Var	*Statistics_1Var:* The number of data points in the current 1-variable analysis (H1-H5). *Statistics_2Var:* The number of data points in the current 2-variable analysis (S1-S5).
NbPmt	app TVM var	Finance	NbPmt - The number of payments in an investment or loan. **n ► NbPmt**, where n>0, sets the value of NbPmt to n.
NewValue	app Percent change var	Finance	NewValue stores the new value in percent-change calculations and the part number in part-total calculations. **n ► NewValue** sets the value of NewValue to n
NFV	app Cash flow var	Finance	NFV stores the Net Future Value when a Cash Flow calculation is performed.
Nmax	app Plot var	Sequence	Nmax contains the final value for N in Sequence app Plot view. **Nmax := n**, where n is a counting number such that n>Nmin
Nmin	app Plot var	Sequence	Nmin contains the starting value for N in Sequence App Plot view. **Nmin := n**, where n is a counting number
NomInt	app Interest conversion var	Finance	NomInt stores the nominal interest rate when doing an Interest Conversion calculation. **n ► NomInt**, where 0≤n≤100, sets the value of NomInt to n.
Notes	Home System		[The Help screen for Notes is too long to copy here. Refer to it for details.]
NPV	app Cash flow var	Finance	NPV stores the Net Present Value when a Cash Flow equation is performed.
NumIndep	app Numeric var	Function / Advanced_Graphing / Parametric / Polar / Sequence / Graph_3D	NumIndep contains the list of values you have entered in Numeric view when you have chosen BuildYourOwn mode. In the case of the Advanced Graphing app, the list is of pairs of values.
NumStart	app Numeric var	Function / Parametric / Polar / Sequence	NumStart sets the starting value for the independent variable in Numeric view when Automatic is the Num Type. **NumStart := n**, where n is a real number
NumStep	app Numeric var	Function / Parametric / Polar / Sequence	NumStep sets the step size (increment) for the independent variable in Numeric view when Automatic is the Num Type. **NumStep := n**, where n is a real number such that n>0
NumType	app Numeric var	Function / Advanced_Graphing / Parametric / Polar / Sequence / Graph_3D	Determines how the independent variable values in Numeric view are generated: • Automatic: uses the NumStart and NumStep values to create the independent variable values. • Build Your Own: you enter the independent variable values one by one. **NumType := 0** for Automatic (default) **NumType := 1** for BuildYourOwn
NumXStart	app Numeric var	Advanced_Graphing / Graph_3D	NumXStart sets the starting value for the X variable in Numeric view when Automatic is the Num Type. **NumXStart := n**, where n is a real number
NumXStep	app Numeric var	Advanced_Graphing / Graph_3D	NumXStep sets the step size (that is, increment value) for the X variable in Numeric view when Automatic is the Num Type. **NumXStep := n**, where n>0
NumXZoom	app Numeric var	Advanced_Graphing / Graph_3D	NumXZoom sets the default zoom factor for zooming in on the X values. **NumXZoom := n**, where n is a real number greater than 1
NumYStart	app Numeric var	Advanced_Graphing / Graph_3D	NumYStart sets the starting value for the Y variable in Numeric view when Automatic is the Num Type. **NumYStart := n**, where n is a real number
NumYStep	app Numeric var	Advanced_Graphing / Graph_3D	NumYStep sets the step size (that is, increment value) for the Y variable in Numeric view when Automatic is the Num Type. **NumYStep := n**, where n>0
NumYZoom	app Numeric var	Advanced_Graphing / Graph_3D	NumYZoom sets the default zoom factor for zooming in on the Y values. **NumYZoom := n**, where n is a real number greater than 1
NumZoom	app Numeric var	Function / Parametric / Polar / Sequence	NumZoom sets the Numeric view factor. **NumZoom := n**, where n>0 (default is 4)
NUS	app Cash flow var	Finance	NUS stores the Net Uniform Series when a Cash Flow calculation is performed.
O	global real		
ObsList	app Numeric var	Inference	ObsList is a list that contains the observed counts for each category from the last Chi-Square goodness of fit (GoF) test.
ObsMat	app Numeric var	Inference	ObsMat is a matrix that contains the observed count data from the last Chi-Square 2-Way test calculation.
OldValue	app Percent change var	Finance	OldValue stores the old value in percent-change calculations and the total in part-total calculations. **n ► OldValue** sets the value of OldValue to n
P	global real		
Payback	app Cash flow var	Finance	Payback stores the Pay Back period when a Cash Flow calculation is performed.

PixSize	app Plot var	Geometry	The size of each square pixel in Cartesian units
PMT	app TVM var	Finance	PMT - The value of a payment for an investment or loan. **n ► PMT** sets the value of PMT to n.
Pooled	app Numeric var	Inference	Determine whether or not the samples are pooled for tests or intervals using the Student's T-distribution involving two means. **0 ► Pooled** for not pooled (default) **1 ► Pooled** for pooled
PoseTurn	app Plot var	Graph_3D	???
PoseXaxis	app Plot var	Graph_3D	???
PoseYaxis	app Plot var	Graph_3D	???
PoseZaxis	app Plot var	Graph_3D	???
PPYR	app TVM var	Finance	PPYR - The number of payments made per year for an investment or loan. **n ► PPYR**, where n>0, sets the value of PPYR to n.
Price	app Percent change var	Finance	Price stores the sales price in markup calculations. **n ► Price** sets the value of Price to n
PriceBond	app Bond var	Finance	PriceBond stores the price of a bond when doing a Bond calculation. **n ► PriceBond** sets the value of PriceBond to n
Prob	app Results var	Inference	Prob contains the probability associated with the TestScore value.
ProbList	app Numeric var	Inference	ProbList is a list that contains the probabilities for each category from the last Chi-Square goodness of fit (GoF) test.
Profit	app Break even var	Finance	Profit stores the expected profit within a Break-even calculation. **n ► Profit**, where n>0, sets the value of Profit to n
Programs	Home System		[The Help screen for Programs is too long to copy here. Refer to it for details.]
PV	app TVM var	Finance	PV - The present value of an investment or loan. **n ► PV** sets the value of PV to n.
Q	global real		
Q_1	app Results var	Statistics_1Var	The value of the first quartile in the current 1-variable analysis (H1-H5).
Q_3	app Results var	Statistics_1Var	The value of the third quartile in the current 1-variable analysis (H1-H5).
Quantity	app Break even var	Finance	Quantity stores the number of units sold within a Break-even calculation. **n ► Quantity**, where n>0, sets the value of Quantity to n
R	global real		
R0-R9	app Symbolic var	Polar	(See the Polar app's Symbolic View screen)
Recenter	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Inference / Graph_3D	Recenter specifies if the plot recenters on the cursor during Zoom operations in plot view. **Recenter := 0** — recenter on cursor (default) **Recenter := 1** — do not recenter on cursor
Result	app Results var	Inference	For hypothesis tests, contains 0 or 1 to indicate rejection of or failure to reject the null hypothesis.
RiskFree	app Black-Scholes var	Finance	RiskFree stores the risk free interest rate in a Black-Scholes calculation. **n ► RiskFree** sets the value of RiskFree to n
Root	app Results var	Function	Root contains the last value found either by the Root function in the Plot view Fcn menu or calculated using the ROOT app function.
Row	app Numeric var	Spreadsheet	Row is a variable that indicates currently calculated cell row number. This is mostly used when creating generic expression that need to work anywhere in the spreadsheet or for columns or full spreadsheet expressions. **Example steps:** 1. Select column A 2. Type **=expand((x+1)^Row)** 3. Tap the CAS menu button 4. Tap the OK menu button Column A will now contain the expansions of $(x+1)^1$, $(x+1)^2$, $(x+1)^3$, etc.
RowHeight	app Numeric var	Spreadsheet	**RowHeight(Integer)** allows you to set and get the height of rows. **Integer1 ► RowHeight(Integer2)** sets the height of row Integer2 to Integer1 pixels. If Integer2 is not specified, sets the default height for rows in the spreadsheet to Integer1 pixels. **RowHeight(Integer)** returns the height of the row specified by Integer. You can also set the column width from the Format menu.
S	global real		
s_1	app Numeric var	Inference	Sets the sample standard deviation for a hypothesis test or confidence interval. For a test or interval involving the difference of two means, sets the sample standard deviation of the first sample. **n ► s_1** sets the value of s_1 to n.
s_2	app Numeric var	Inference	For a test or interval involving the difference of two means, sets the sample standard deviation of the second sample. **n ► s_2** sets the value of s_2 to n.
S1-S5	app Symbolic var	Statistics_2Var	(See the Statistics 2Var app's Symbolic View screen)

SafeInt	app Cash flow var	Finance	SafeInt contains the cash flow safe interest rate. **n ► SafeInt**, where 0≤n≤100, sets the value of SafeInt to n
SalePrice	app Break even var	Finance	SalePrice stores the sales price per unit within a Break-even calculation. **n ► SalePrice**, where n>0, sets the value of SalePrice to n
SalvageAsset	app Depreciation var	Finance	SalvageAsset stores the amount of money an asset can be sold or salvaged for at the end of its life when doing a Depreciation calculation. **n ► SalvageAsset**, where n>0, sets the value of SalvageAsset to n
sCov	app Results var	Statistics_2Var	sCov contains the sample covariance of the current 2-variable statistical analysis (S1-S5).
ScrollText	app Plot var	Geometry	ScrollText controls the Scroll Text property in the Geometry Plot Setup screen. **ScrollText := 0** Scroll Text check box cleared. (Default) **ScrollText := 1** Scroll Text check box set. When ScrollText=1, long text in the menu in the Geometry plot view will scroll.
SemiAnnual	app Bond var	Finance	SemiAnnual stores whether annual or semi-annual payments are made when doing a Bond calculation. **SemiAnnual := 0** for annual payments **SemiAnnual := 1** for semi-annual payments
serrInter	app Results var	Inference	serrInter contains the value of the standard error of the intercept from the last linear regression t-test or confidence interval for the intercept.
serrLine	app Results var	Inference	serrLine contains the value of the standard error of the line from the last linear regression t-test.
serrSlope	app Results var	Inference	serrSlope contains the value of the standard error of the slope from the last linear regression t-test or confidence interval for slope.
serrX	app Results var	Statistics_1Var / Statistics_2Var	*Statistics_1Var:* The standard error of the data set in the current 1-variable analysis (H1-H5). *Statistics_2Var:* The standard error of the independent values (X) of the current 2-variable statistical analysis (S1-S5).
serrY	app Results var	Statistics_2Var / Inference	*Statistics_2Var:* serrY contains the standard error of the dependent values (Y) of the current 2-variable statistical analysis (S1-S5). *Inference:* serrY contains the value of the standard error of $\hat{y}$ from the last prediction interval or mean response interval calculation.
SetDate	app Bond var	Finance	SetDate stores the settlement date of a bond when doing a Bond calculation. Dates should be entered as YYYY.MMDD **n ► SetDate**, where n is YYYY.MMDD, sets the value of SetDate to n
SideA	app Numeric var	Triangle_Solver	SideA - The length of the side opposite the angle A. **n ► SideA**, where n>0, sets the value of SideA to n.
SideB	app Numeric var	Triangle_Solver	SideB - The length of the side opposite the angle B. **n ► SideB**, where n>0, sets the value of SideB to n.
SideC	app Numeric var	Triangle_Solver	SideC - The length of the side opposite the angle C. **n ► SideC**, where n>0, sets the value of SideC to n.
Signed	Home Settings		Returns or sets the integer signed format. **Signed := 0** for unsigned (default) **Signed := 1** for signed
SignedArea	app Results var	Function	SignedArea contains the last value found by either the Signed area function in the Plot view Fcn menu or calculated using the AREA app function.
Slope	app Results var	Function / Inference	*Function:* Slope contains the last value found either by the Slope function in the Plot view Fcn menu or calculated using the SLOPE app function. *Inference:* Slope contains the value of the slope from the last linear regression t-test.
SS	app Results var	Inference	SS contains the value of the sum of squares of the treatments from the last ANOVA 1-way calculation.
SSerr	app Results var	Inference	SSerr contains the value of the sum of squares of the errors from the last ANOVA 1-way calculation.
ssX	app Results var	Statistics_1Var / Statistics_2Var	*Statistics_1Var:* The sum of the squared deviations of x from the mean of x of the data set in the current 1-variable analysis (H1-H5). *Statistics_2Var:* The sum of the squared deviations of x from the mean of x of the independent values (X) of the current 2-variable statistical analysis (S1-S5).
ssY	app Results var	Statistics_2Var	ssY contains the sum of the squared deviations of y from the mean of y of the dependent values (Y) of the current 2-variable statistical analysis (S1-S5).
StockPrice	app Black-Scholes var	Finance	StockPrice stores the stock or asset price in a Black-Scholes calculation. **n ► StockPrice** sets the value of StockPrice to n
StrikePrice	app Black-Scholes var	Finance	StrikePrice stores the strike price in a Black-Scholes calculation. **n ► StrikePrice** sets the value of StrikePrice to n
Surface	app Plot var	Graph_3D	???
sX	app Results var	Statistics_1Var / Statistics_2Var	*Statistics_1Var:* The sample standard deviation of the data set in the current 1-variable analysis (H1-H5). *Statistics_2Var:* The sample standard deviation of the independent values (X) of the current 2-variable statistical analysis (S1-S5).
sY	app Results var	Statistics_2Var	sY contains the sample standard deviation of the dependent values (Y) of the current 2-variable statistical analysis (S1-S5).

T	global real		
TestScore	app Results var	Inference	TestScore contains the Z- or t-distribution value calculated from the hypothesis test or confidence interval inputs.
TestValue	app Results var	Inference	TestValue contains the value of the experimental variable associated with the current value in the app variable TestScore.
Theme	Home System		Theme variable contains a list representing the current theme and the color shade. May take a single number as input to return the indexed item from the list. Examples: **Theme()** **Theme(1)**
Time	Home System		**Time** returns the system time in DMS format. DMS format is HH°MM'SS" where HH = hours, MM = minutes, and SS = seconds. **Time := HH°MM'SS"** sets the time.
TimeMarket	app Black-Scholes var	Finance	TimeMarket stores the time to market of an option in a Black-Scholes calculation. **n ► TimeMarket** sets the value of TimeMarket to n
Tmax	app Plot var	Parametric	Tmax contains the final value for T in parametric Plot view. **Tmax := n** , where n is a real number such that n>Tmin
Tmin	app Plot var	Parametric	Tmin contains the starting value for T in parametric Plot view. **Tmin := n**, where n is a real number
TOff	Home System		TOff contains an integer that defines the number of milliseconds until the next calculator auto shutoff. The default is 5 minutes, or #493E0h. (5*60*1000 milliseconds) Valid ranges are from #1388h to #3FFFFFFFh.
Total	app Percent change var	Finance	Total stores the percentage of the total in part-total calculations. **n ► Total** sets the value of Total to n
TotalCF	app Cash flow var	Finance	TotalCF stores the cash flow total when a Cash Flow calculation is performed.
TriType	app Numeric var	Triangle_Solver	Corresponds to the status of the TriType menu key in the Numeric view of the Triangle Solver app. It determines whether a general triangle solver or a right triangle solver is used. **0 ► TriType** for the general triangle solver (default) **1 ► TriType** for the right triangle solver
Tstep	app Plot var	Parametric	Tstep contains the step value (increment) of T in parametric Plot view. **Tstep := n**, where n is a real number such that n>0
U	global real		
U0-U9	app Symbolic var	Sequence	(See the Sequence app's Symbolic View screen)
V	global real		
V0-V9	app Symbolic var	Advanced_Graphing	(See the Advanced Graphing app's Symbolic View screen)
VariableCost	app Break even var	Finance	VariableCost stores the manufacturing cost per unit within a Break-even calculation. **n ► VariableCost**, where N>0, sets the value of VariableCost to n
Volatility	app Black-Scholes var	Finance	Volatility stores the volatility of an asset in a Black-Scholes calculation. **n ► Volatility** sets the value of Volatility to n
W	global real		
X	global real		
x_1	app Numeric var	Inference	Sets the number of successes for a one-proportion hypothesis test or confidence interval. For a test or interval involving the difference of two proportions, sets the number of successes of the first sample. **n ► x_1** sets the value of x_1 to n.
x_2	app Numeric var	Inference	For a test or interval involving the difference of two proportions, sets the number of successes of the second sample. **n ► x_2** sets the value of x_2 to n.
X0-X9	app Symbolic var	Parametric	(See the Parametric app's Symbolic View screen)
Xlist	app Numeric var	Inference	Xlist is a list that contains the data for the explanatory (X) variable from the last inference for regression calculation.
Xmax	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Inference / Graph_3D	Xmax sets the maximum horizontal value in the Plot view. **Xmax := n**, where n is a real number such that n>Xmin
Xmin	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Geometry / Solve / Inference / Graph_3D	Xmin sets the minimum horizontal value of the Plot view. **Xmin := n**, where n is a real number
Xtick	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Geometry / Inference / Graph_3D	Xtick sets the distance between tick marks for the horizontal axis. **Xtick := n**, where n is a real number such that n>0
Xval	app Numeric var	Inference	Xval contains the value of the explanatory variable (X) from the last mean response interval or prediction interval calculation.

Xzoom	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Inference / Graph_3D	Xzoom sets the horizontal zoom factor. **Xzoom := n**, where n is a real number such that n>0 (default is 2)
Y	global real		
Y0-Y9	app Symbolic var	Parametric	(See the Parametric app's Symbolic View screen)
YieldBond	app Bond var	Finance	YieldBond stores the yield to maturity of a bond when doing a Bond calculation. **n ► YieldBond** sets the value of YieldBond to n
Ylist	app Numeric var	Inference	Ylist is a list that contains the data for the response (Y) variable from the last inference for regression calculation.
Ymax	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Inference / Graph_3D	Ymax sets the maximum vertical value in the Plot view. **Ymax := n**, where n is a real number such that n>Ymin
Ymin	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Geometry / Solve / Inference / Graph_3D	Ymin sets the minimum vertical value of the Plot view. **Ymin := n**, where n is a real number
Ytick	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Geometry / Inference / Graph_3D	Ytick sets the distance between tick marks for the vertical axis. **Ytick := n**, where n is a real number such that n>0
Yval	app Results var	Inference	Yval contains the value of $\hat{y}$ from the last prediction interval or mean response interval calculation.
Yzoom	app Plot var	Function / Advanced_Graphing / Statistics_1Var / Statistics_2Var / Parametric / Polar / Sequence / Solve / Inference / Graph_3D	Yzoom sets the vertical zoom factor. **Yzoom := n**, where n is a real number such that n>0 (default is 2)
Z	global real		
Z0-Z9	global complex		
z0-z9	app Symbolic var	Graph_3D	(See the 3D Graphing app's Symbolic View screen)
Zmax	app Plot var	Graph_3D	???
Zmin	app Plot var	Graph_3D	???
Ztick	app Plot var	Graph_3D	???
Zzoom	app Plot var	Graph_3D	???