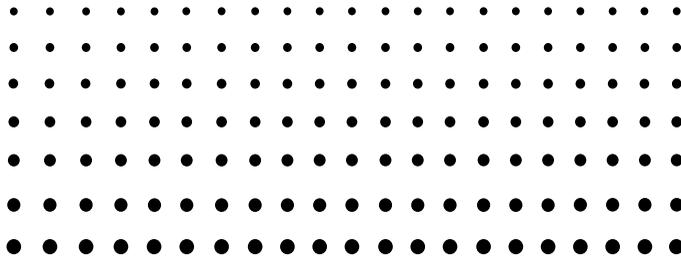


For ClassPad 300

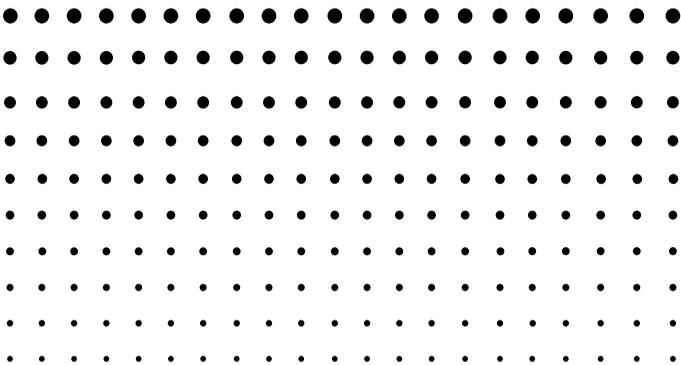
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Spreadsheet Application

Version 2.0

User's Guide



CASIO®

<http://classpad.net/>

Using the Spreadsheet Application

The Spreadsheet application provides you with powerful, take-along-anywhere spreadsheet capabilities on your ClassPad.



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1 Spreadsheet Application Overview

This section describes the configuration of the Spreadsheet application window, and provides basic information about its menus and commands.

Starting Up the Spreadsheet Application

Use the following procedure to start up the Spreadsheet application.

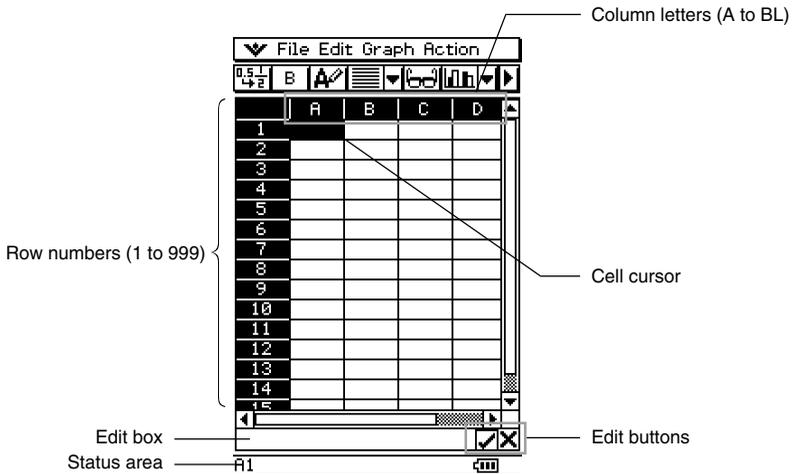
• ClassPad Operation

(1) On the application menu, tap  Spreadsheet.

- This starts the Spreadsheet application and displays its window.

Spreadsheet Window

The Spreadsheet window shows a screen of cells and their contents.



- Each cell can contain a value, expression, text, or a formula. Formulas can contain a reference to a specific cell or a range of cells.

2 Spreadsheet Application Menus and Buttons

This section explains the operations you can perform using the menus and buttons of the Spreadsheet application window.

- For information about the  menu, see “Using the  Menu” on page 1-5-4 of your ClassPad 300 User’s Guide.

■ File Menu

To do this:	Select this [File] menu item:
Create a new, empty spreadsheet	New
Open an existing spreadsheet	Open
Save the currently displayed spreadsheet	Save

■ Edit Menu

To do this:	Select this [Edit] menu item:
Undo the last action, or redo the action you have just undone	Undo/Redo
Display a dialog box that lets you show or hide scrollbars, and specify the direction the cursor advances when inputting data	Options
Automatically resize columns to fit the data into the selected cells	AutoFit Selection
Display a dialog box for specifying column width	Column Width
Display a dialog box for specifying the number format of the selected cell(s)	Number Format
Display or hide the Cell Viewer window	Cell Viewer
Display a dialog box for specifying a cell to jump to	Goto Cell
Display a dialog box for specifying a range of cells to select	Select Range
Display a dialog box for specifying cell contents and a range of cells to fill	Fill Range
Display a dialog box for specifying a sequence to fill a range of cells	Fill Sequence
Insert row(s)	Insert - Rows
Insert column(s)	Insert - Columns
Delete the currently selected row(s)	Delete - Rows
Delete the currently selected column(s)	Delete - Columns
Delete the contents of the currently selected cells	Delete - Cells
Cut the current selection and place it onto the clipboard	Cut
Copy the current selection and place it onto the clipboard	Copy
Paste the clipboard contents at the current cell cursor location	Paste
Select everything in the spreadsheet	Select All
Clear all data from the spreadsheet	Clear All



■ Graph Menu

You can use the [Graph] menu to graph the data contained in selected cells. See “8 Graphing” for more information.

■ Action Menu

The [Action] menu contains a selection of functions that you can use when configuring a spreadsheet. See “6 Using the Action Menu” for more information.

■ Spreadsheet Toolbar Buttons

Not all of the Spreadsheet buttons can fit on a single toolbar, tap the  button on the far right to toggle between the two toolbars.



To do this:	Tap this button:
Toggle the selected cell(s) between decimal (floating point) and exact display* ¹	
Toggle the selected cell(s) between bold and normal	
Toggle the data type of the selected cell(s) between text and calculation	
Specify left-justified text and right-justified values for selected cell(s) (default)	
Specify left-justified for selected cell(s)	
Specify centered for selected cell(s)	
Specify right-justified for selected cell(s)	
Display or hide the Cell Viewer window	
Display the Spreadsheet Graph window (page 8-1)	
Delete the currently selected row(s)	
Delete the currently selected column(s)	
Insert row(s)	
Insert column(s)	

*¹ When cell(s) are calculation data types.

Tip

- During cell data input and editing, the toolbar changes to a data input toolbar. See “Edit Mode Screen” on page 4-1 for more information.

3 Basic Spreadsheet Window Operations

This section contains information about how to control the appearance of the Spreadsheet window, and how to perform other basic operations.

About the Cell Cursor

The cell cursor causes the current selected cell or group of cells to become highlighted. The location of the current selection is indicated in the status bar, and the value or formula located in the selected cell is shown in the edit box.

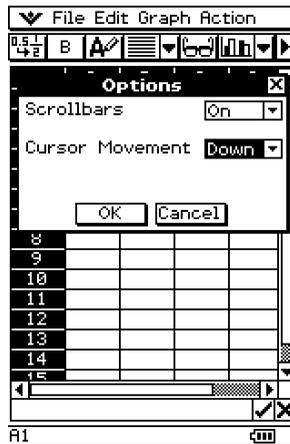
- You can select multiple cells for page formatting, deletion, or insertion.
- See “Selecting Cells” on page 3-5 for more information about selecting cells.

Controlling Cell Cursor Movement

Use the following procedure to specify whether the cell cursor should stay at the current cell, move down to the next line, or move right to the next column when you register data in a Spreadsheet cell.

• ClassPad Operation

- (1) On the [Edit] menu, tap [Options].



- (2) On the dialog box that appears, tap the [Cursor Movement] down arrow button, and then select the setting you want.

To have the cell cursor behave this way when you register input:	Select this setting:
Remain at the current cell	Off
Move to the next row below the current cell	Down
Move to the next column to the right of the current cell	Right

- (3) After the setting is the way you want, tap [OK].

Navigating Around the Spreadsheet Window

The simplest way to select a cell is to tap it with the stylus. You can also drag the stylus across a range of cells to select all of them. If you drag to the edge of the screen, it will scroll automatically, until you remove the stylus from the screen.

The following are other ways you can navigate around the Spreadsheet window.

■ Cursor Keys

When a single cell is selected, you can use the cursor key to move the cell cursor up, down, left, or right.

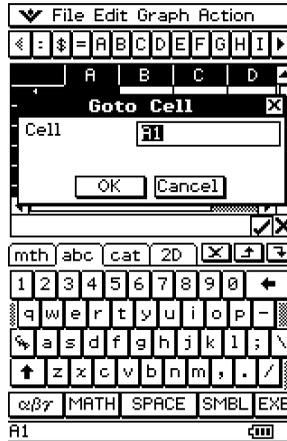


■ Jumping to a Cell

You can use the following procedure to jump to a specific cell on the Spreadsheet screen by specifying the cell's column and row.

● ClassPad Operation

- (1) On the [Edit] menu, select [Goto Cell].



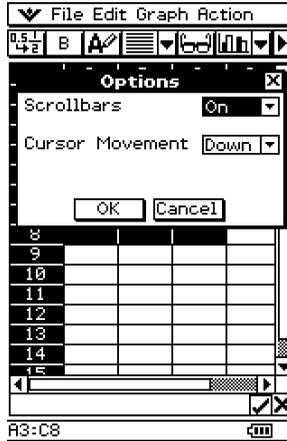
- (2) On the dialog box that appears, type in a letter to specify the column of the cell to which you want to jump, and a value for its row number.
- (3) After the column and row are the way you want, tap [OK] to jump to the cell.

Hiding or Displaying the Scrollbars

Use the following procedure to turn display of Spreadsheet scrollbars on and off. By turning off the scrollbars, you make it possible to view more information in the spreadsheet.

• ClassPad Operation

- (1) On the [Edit] menu, tap [Options].



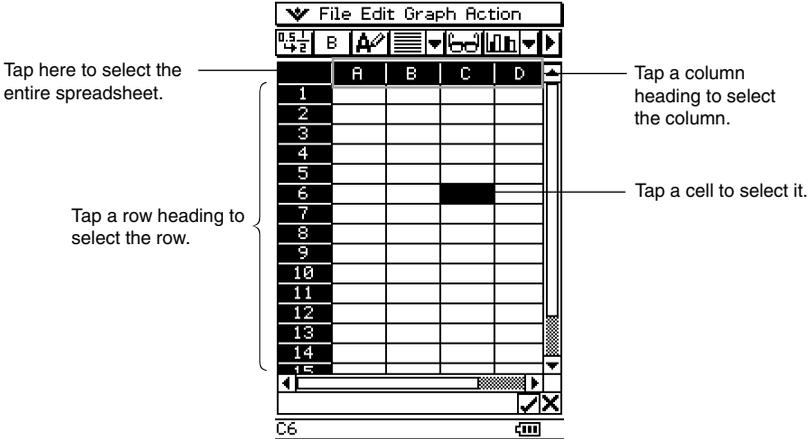
- (2) On the dialog box that appears, tap the [Scrollbars] down arrow button, and then select the setting you want.

To do this:	Select this setting:
Display the scrollbars	On
Hide the scrollbars	Off

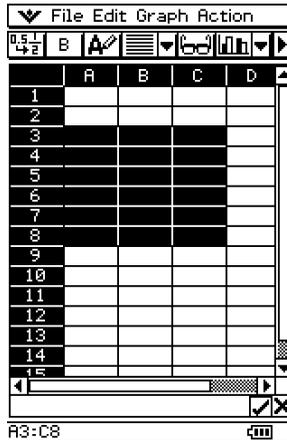
- (3) After the setting is the way you want, tap [OK].

Selecting Cells

Before performing any operation on a cell, you must first select it. You can select a single cell, a range of cells, all the cells in a row or column, or all of the cells in the spreadsheet.

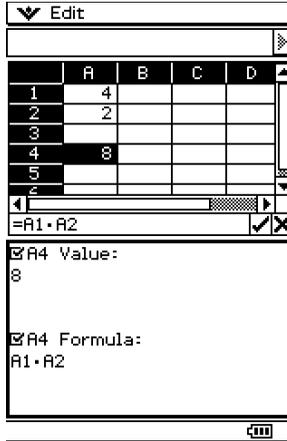


- To select a range of cells, drag the stylus across them.



Using the Cell Viewer Window

The Cell Viewer window lets you view both the formula contained in a cell, as well as the current value produced by the formula.



While the Cell Viewer window is displayed, you can select or clear its check boxes to toggle display of the value and/or formula on or off. You can also select a value or formula and then drag it to another cell.

• To view or hide the Cell Viewer window

On the Spreadsheet toolbar, tap . Or, on the Spreadsheet [Edit] menu, select [Cell Viewer].

- The above operation toggles display of the Cell Viewer window on and off.
- You can control the size and location of the Cell Viewer window using the  and  icons on the icon panel below the touch screen. For details about these icons, see "1-3 Using the Icon Panel" of the ClassPad 300 User's Guide.

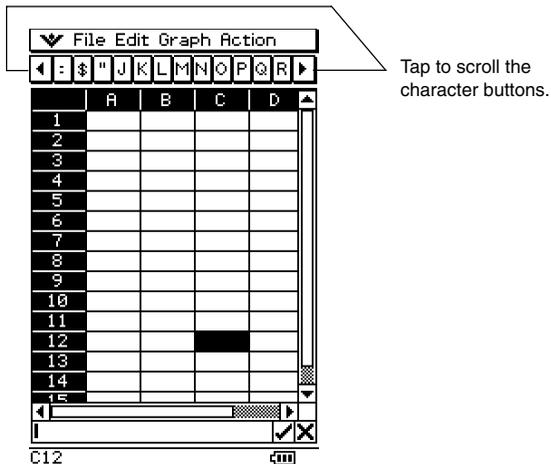
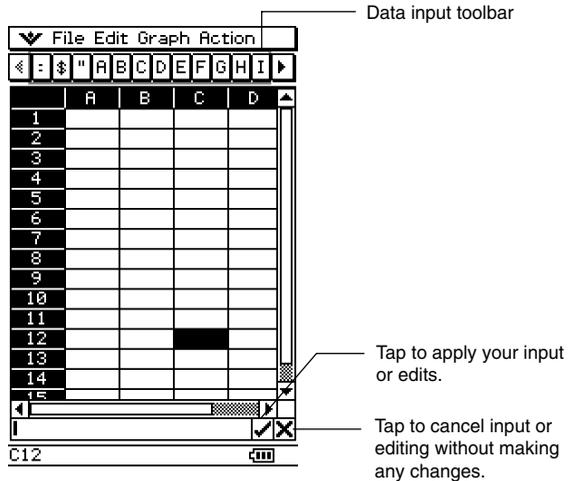
4 Editing Cell Contents

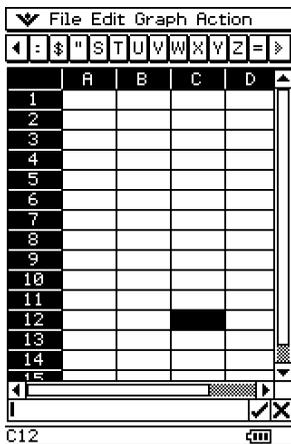
This section explains how to enter the edit mode for data input and editing, and how to input various types of data and expressions into cells.

Edit Mode Screen

The Spreadsheet application automatically enters the edit mode whenever you tap a cell to select it and input something from the keypad.

Entering the edit mode (see page 4-2) displays the editing cursor in the edit box and the data input toolbar.





- You can tap the data input toolbar buttons to input letters and symbols into the edit box.

Entering the Edit Mode

There are two ways you can enter the edit mode:

- Tapping a cell and then tapping inside the edit box
- Tapping a cell and inputting something on the keypad

The following explains the difference between these two techniques.

■ Tapping a cell and then tapping the edit box

- This enters the “standard” edit mode.
- Tapping the edit box selects (highlights) all of the text in the edit box. Tapping the edit box again deselects (unhighlights) the text and displays the editing cursor (a solid blinking cursor).
- Be sure to use this standard editing mode when you want to correct or change the existing contents of a cell.
- The following explains the operation of the cursor key after entering the standard editing mode.

To move the editing cursor here in the edit box text:	Press this cursor key:
One character left	
One character right	
To the beginning (far left)	
To the end (far right)	

■ Tapping a cell and then inputting something from the keypad

- This enters the “quick” edit mode, indicated by a dashed blinking cursor. Anything you input with the keypad will be displayed in the edit box.
- If the cell you selected already contains something, anything you input with the quick edit mode replaces the existing content with the new input.
- In the quick editing mode, pressing the cursor key registers your input and moves the cell cursor in the direction of the cursor key you press.
- Note that you can change to the standard edit mode at any time during the quick edit mode by tapping inside of the edit box.



Basic Data Input Steps

The following are the basic steps you need to perform whenever inputting or editing cell data.

● ClassPad Operation

(1) Enter the edit mode.

- Either tap a cell (quick edit), or tap a cell and then tap the edit box (standard edit).
- See “Selecting Cells” on page 3-5 for more information about selecting cells.

(2) Input the data you want.

- You can input data using the keypad, the [Action] menu, and the input toolbar. See the following sections for more information.

(3) After you are finished, finalize the input using one of the procedures below.

If you are using this edit mode:	Do this to finalize your input:
Standard Edit	<ul style="list-style-type: none"> • Tap the button next to the edit box. • Press the key.
Quick Edit	<ul style="list-style-type: none"> • Press a cursor key. • Or tap the button next to the edit box. • Or press the key.

- This causes the entire spreadsheet to be re-calculated.
- If you want to cancel data input without saving your changes, tap the button next to the edit box or tap on the icon panel.

Important!

- You can also finalize input into a cell by tapping a different cell, *as long as the first character in the edit box is not an equal sign (=)*. Tapping another cell while the first character in the edit box is an equal sign (=) inserts a reference to the tapped cell into the edit box. See “Inputting a Cell Reference” on page 4-6 for more information.

Inputting a Formula

A formula is an expression that the Spreadsheet application calculates and evaluates when you input it, when data related to the formula is changed, etc.

A formula always starts with an equal sign (=), and can contain any one of the following.

- Values
- Mathematical expressions
- Cell references
- ClassPad soft keyboard functions (cat page of keyboard)
- [Action] menu functions (page 6-4)

Formulas are calculated dynamically whenever related values are changed, and the latest result is always displayed in the spreadsheet.

The following shows a simple example where a formula in cell B5 calculates the average of the values in cells B1 through B3.

	A	B
1	Data 1	2.50
2	Data 2	2.30
3	Data 3	2.51
4		
5	Average	2.44
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Formula Bar: =(B1+B2+B3)/3

Status Bar: B5 2.436666667

Important!

- Tapping another cell while the first character in the edit box is an equal sign (=) inserts a reference to the tapped cell into the edit box. Dragging across a range of cells will input a reference to the selected range. See “Inputting a Cell Reference” on page 4-6 for more information.
- When a cell is set to text data type, formulas are displayed as text when they are not preceded by an equal sign (=).
- When a cell is set to calculation data type, an error occurs when a formula is not preceded by an equal sign (=).

• To use the soft keyboards to input a function

Example: To input the following

Cell A1: $x^{\text{row}(A1)}$

Cell B1: $\text{diff}(A1, x, 1)$

(1) Tap cell A1 to select it.

(2) Press = , x , and then ^ .

Inputting a Cell Reference

A cell reference is a symbol that references the value of one cell for use by another cell. If you input “=A1 + B1” into cell C2, for example, the Spreadsheet will add the current value of cell A1 to the current value of cell B1, and display the result in cell C2.

There are two types of cell references: *relative* and *absolute*. It is very important that you understand the difference between relative and absolute cell references. Otherwise, your spreadsheet may not produce the results you expect.

■ Relative Cell Reference

A relative cell reference is one that changes according to its location on the spreadsheet. The cell reference “=A1” in cell C2, for example, is a reference to the cell located “two columns to the left and one cell up” from the current cell (C2, in this case). Because of this, if we copy or cut the contents of cell C2 and paste them into cell D12, for example, the cell reference will change automatically to “=B11”, because B11 is two columns to the left and one cell up from cell D12.

Be sure to remember that relative cell references always change dynamically in this way whenever you move them using cut and paste, or drag and drop.

Important!

- When you cut or copy a relative cell reference from the edit box, it is copied to the clipboard as text and pasted “as-is” without changing. If “=A1” is in cell C2 and you copy “=A1” from the edit box and paste it into cell D12, for example, D12 will also be “=A1”.

■ Absolute Cell References

An absolute cell reference is the one that does not change, regardless of where it is located or where it is copied to or moved to. You can make both the row and column of a cell reference absolute, or you can make only the row or only the column of a cell reference absolute, as described below.

This cell reference:	Does this:
\$A\$1	Always refers to column A, row 1
\$A1	Always refers to column A, but the row changes dynamically when moved, as with a relative cell reference
A\$1	Always refers to row 1, but the column changes dynamically when moved, as with a relative cell reference

Let’s say, for example, that a reference to cell A1 is in cell C1. The following shows what each of the above cell references would become if the contents of cell C1 were copied to cell D12.

\$A\$1 → \$A\$1

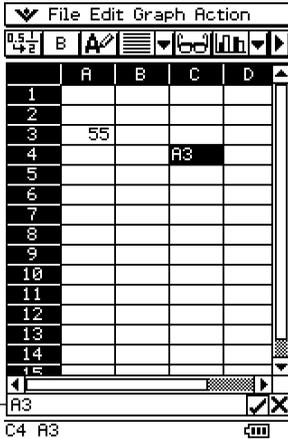
\$A1 → \$A12

A\$1 → B\$1

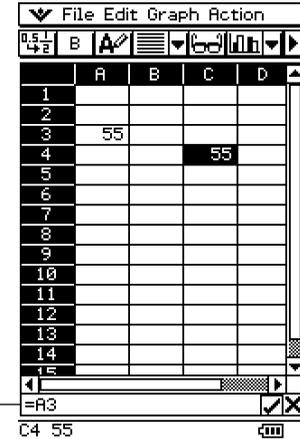


• To input a cell reference

- (1) Select the cell where you want to insert the cell reference.
- (2) Tap inside the edit box.
- (3) If you are inputting new data, input an equal sign (=) first. If you are editing existing data, make sure that its first character is an equal sign (=).
 - Inputting a cell name like "A3" without an equal sign (=) at the beginning will cause "A" and "3" to be input as text, without referencing the data in cell A3.



Incorrect cell reference (no "=" sign)



Correct cell reference

- (4) Tap the cell you want to reference (which will input its name into the edit box automatically) or use the editing toolbar and keypad to input its name.

Important!

- The above step always inputs a relative cell reference. If you want to input an absolute cell reference, use the stylus or cursor keys to move the editing cursor to the appropriate location, and then use the editing toolbar to input a dollar (\$) symbol. See "Inputting a Cell Reference" on page 4-6 for more information about relative and absolute cell references.
- (5) Repeat step (4) as many times as necessary to input all of the cell references you want. For example, you could input "=A1 + A2". You can also input a range of cells into the edit box by dragging across a group of cells.
 - (6) After your input is the way you want, tap the button next to the edit box or press the **EXE** key to save it.

Inputting a Constant

A constant is data whose value is defined when it is input. When you input something into a cell for which text is specified as the data type without an equal sign (=) at the beginning, a numeric value is treated as a constant and non-numeric values are treated as text.

Note the following examples for cells of  type:

This input:	Is interpreted as:	And is treated as:
sin(1)	A numeric expression	A constant value
1+1/2	A numeric expression	A constant value
1.02389	A numeric expression	A constant value
sin(x)	A symbolic expression	Text
x+y	A symbolic expression	Text
Result	A string expression	Text
sin(Invalid expression context	Text

- When text is too long to fit in a cell, it spills over into the next cell to the right if the neighboring cell is empty. If the cell to the right is not empty, the text is cut off and “...” is displayed to indicate that non-displayed text is contained in the cell.

Using the Fill Sequence Command

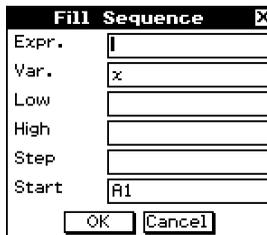
The Fill Sequence command lets you set up an expression with a variable, and input a range of values based on the calculated results of the expression.

• To input a range of values using Fill Sequence

Example: To configure a Fill Sequence operation according to the following parameters

Expression: $1/x$
 Change of x Value: From 1 to 25
 Step: 1
 Input Location: Starting from A1

- (1) On the [Edit] menu, tap [Fill Sequence].



- (2) Use the dialog box that appears to configure the Fill Sequence operation as described below.

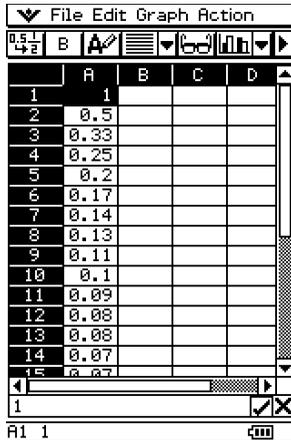
Parameter	Description
Expr.	Input the expression whose results you want to input.
Var.	Specify the name of the variable whose value will change with each step.
Low	Specify the smallest value to be assigned to the variable.
High	Specify the greatest value to be assigned to the variable.
Step	Specify the value that should be added to the variable value with each step.
Start	Specify the starting cell from which the results of the expression should be inserted.

- The following shows how the Fill Sequence dialog box should appear after configuring the parameters for our example.



(3) After everything is the way you want, tap [OK].

- This performs all the required calculations according to your settings, and inserts the results into the spreadsheet.
- The following shows the results for our example.



	A	B	C	D
1	1			
2	0.5			
3	0.33			
4	0.25			
5	0.2			
6	0.17			
7	0.14			
8	0.13			
9	0.11			
10	0.1			
11	0.09			
12	0.08			
13	0.08			
14	0.07			
15	0.07			

Cut and Copy

You can use the [Cut] and [Copy] commands on the Spreadsheet application [Edit] menu to cut and copy the contents of the cells currently selected (highlighted) with the cell cursor. You can also cut and copy text from the edit box.

The following types of cut/copy operations are supported.

- Single cell cut/copy
- Multiple-cell cut/copy
- Selected edit box text cut/copy
- Cell Viewer values and formulas copy only

Cutting or copying data places it onto the clipboard. You can use the [Paste] command to paste the clipboard contents at the current cell cursor or editing cursor location.

Paste

The [Edit] menu's [Paste] command lets you paste the data that is currently on the clipboard at the current cell cursor or editing cursor location.

Important!

- Pasting cell data will cause all relative cell references contained in the pasted data to be changed in accordance with the paste location. See "Inputting a Cell Reference" on page 4-6 for more information.
- Relative cell references in data copied or cut from the edit box do not change when pasted into another cell.

The following summarizes how different types of data can be pasted.

■ When the clipboard contains data from a single cell or the edit box

If you do this:	Executing the [Paste] command will do this:
Select a single cell with the cell cursor	Paste the clipboard data into the selected cell
Select multiple cells with the cell cursor	Paste the clipboard data into each of the selected cells
Locate the editing cursor inside the edit box	Paste the clipboard data at the editing cursor location

■ When the clipboard contains data from multiple cells

If you do this:	Executing the [Paste] command will do this:
Select a single cell with the cell cursor	Paste the clipboard data starting from the selected cell
Select multiple cells with the cell cursor	Paste the clipboard data starting from the first (top left) cell
Locate the editing cursor inside the edit box	Paste the clipboard data at the editing cursor location in matrix format



- The following shows how cell data is converted to a matrix format when pasted into the edit box.

	A	B	C	D
1	1	8	4	
2	7	2	6	
3	3	6	9	
4				
5				
6				
7				
8				
9				
10				
11				
12				

	A	B	C	D
1	1	8	4	
2	7	2	6	
3	3	6	9	
4				
5				
6				
7				
8				
9				
10				
11				
12				

Select the cell where you want to insert the text (A6 in this example), and then tap inside the edit box.

	A	B	C	D
1	1	8	4	
2	7	2	6	
3	3	6	9	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Tap [Edit], and then [Paste].

	A	B	C	D
1	1	8	4	
2	7	2	6	
3	3	6	9	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

To view the matrix as text, tap the cell (A6) and then [Edit].

	A	B	C	D
2	7	2	6	
3	3	6	9	
4				
5				
6	[[1,8,4],[7,2,6],[3,6,9]]			
7				

To view the matrix as 2D, tap [A] to change data types.

	A	B	C	D
2	7	2	6	
3	3	6	9	
4				
5				
6	[[1,8,4],[7,2,6],[3,6,9]]			
7				

Specifying Text or Calculation as the Data Type for a Particular Cell

A simple toolbar button operation lets you specify that the data contained in the currently selected cell or cells should be treated as either text or calculation data. The following shows how the specified data type affects how a calculation expression is handled when it is input into a cell.

When this data type is specified:	Inputting this into the cell:	Causes this to be displayed:
Text  (toolbar button for text)	=2+2	4
	2+2	2+2
Calculation  (toolbar button for math)	=2+2	4
	2+2	4

Important!

- Unless noted otherwise, all of the input examples in this User's Guide assume that input is being performed into a cell for which text is specified as the data type. Because of this, calculations that evaluate will be preceded with an equal sign (=).

• **ClassPad Operation**

- (1) Select the cell(s) whose data type you want to specify.
 - See "Selecting Cells" on page 3-5 for information about selecting cells.
- (2) On the toolbar, tap the third button from the left ( / ) to toggle the data type between text and calculation.



Using Drag and Drop to Copy Cell Data within a Spreadsheet

You can also copy data from one cell to another within a spreadsheet using drag and drop. If the destination cell already contains data, it is replaced with the newly dropped data.

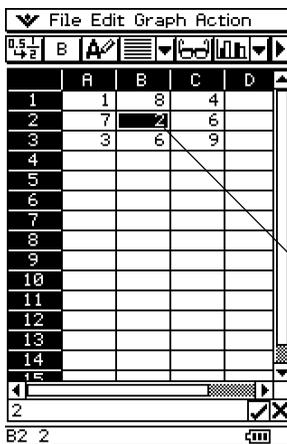
- When performing this operation, you can drag and drop between cells, or from one location to another within the edit box only. You cannot drag and drop between cells and the edit box.

Important!

- Remember that moving cell data within a spreadsheet using drag and drop will cause all relative cell references in the data to be changed accordingly. See "Inputting a Cell Reference" on page 4-6 for more information.

• To drag and drop between cells within a spreadsheet

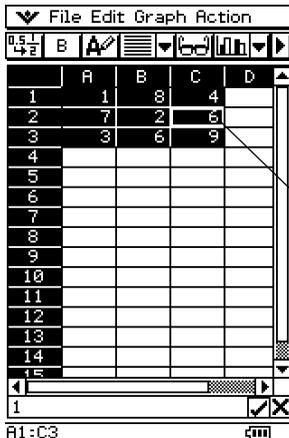
- (1) Use the stylus to select the cell or range of cells you want to copy so it is highlighted. Lift the stylus from the screen after you select the cell(s).
 - See "Selecting Cells" on page 3-5 for information about selecting cells.
- (2) Hold the stylus against the selected cell(s).



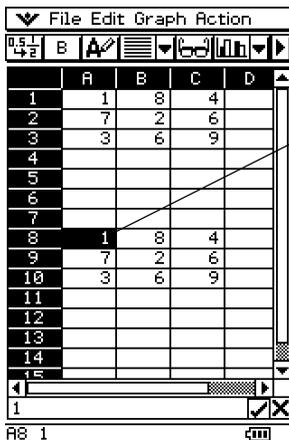
- Check to make sure that a white selection boundary appears where you hold the stylus against the screen.
 - If you have multiple cells selected (highlighted), the selection boundary will appear only around the single cell where the stylus is located. See "Dragging and Dropping Multiple Cells" on page 4-15 for more information.
- (3) Drag the stylus to the desired location and then lift the stylus to drop the cell(s) in place.

■ Dragging and Dropping Multiple Cells

- When dragging multiple cells, only the cell where the stylus is located has a selection boundary around it.



- When you release the stylus from the screen, the top left cell of the group (originally A1 in the above example) will be located where you drop the selection boundary.



• **To drag and drop within the edit box**

- (1) Select the cell whose contents you want to edit.
- (2) Tap the edit box to enter the edit mode.
- (3) Tap the edit box again to display the editing cursor (a solid blinking cursor).
- (4) Drag the stylus across the characters you want to move, so they are highlighted.
- (5) Holding the stylus against the selected characters, drag to the desired location.
- (6) Lift the stylus to drop the characters in place.

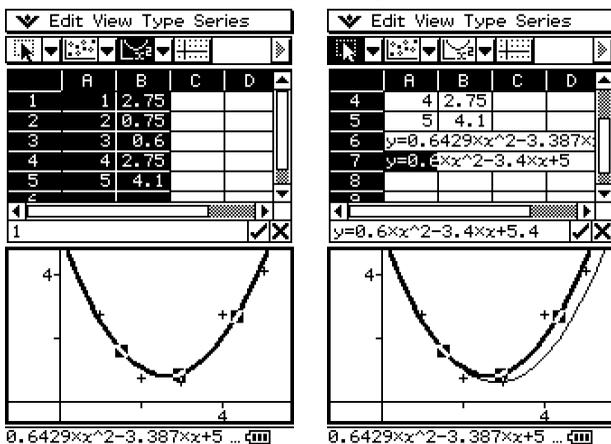


Using Drag and Drop to Obtain Spreadsheet Graph Data

The following examples show how you can drag graph data from a Spreadsheet application Graph window to obtain the graph's function or the values of the graph's data.

• **To use drag and drop to obtain the function of a graph**

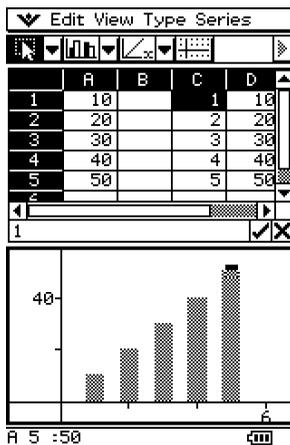
Example: To obtain the function of the regression graph shown below



- (1) Input data and draw a regression curve.
 - See “Other Graph Window Operations” on page 8-13 for more information on graphing.
- (2) Tap the graph window to make it active.
- (3) Tap the graph curve and then drag to the cell you want in the Spreadsheet window.
 - You can now edit the regression equation in the Spreadsheet edit box and then drag it back to the Graph window.
 - This will cause the graph's function to appear inside the cell.

• To use drag and drop to obtain the data points of a graph

Example: To obtain the data points of the bar graph shown below



(1) Input data and draw a bar graph.

- See “Other Graph Window Operations” on page 8-13 for more information on graphing.

(2) Tap the Graph window to make it active.

(3) Tap the top of any bar within the Graph window, and then drag to the cell you want in the Spreadsheet window.

- This will cause the bar graph’s data to appear beginning at the cell you tapped.

5 Using the Spreadsheet Application with the eActivity Application

You can display the Spreadsheet application from within the eActivity application. This makes it possible to drag data between the Spreadsheet and eActivity windows as desired.

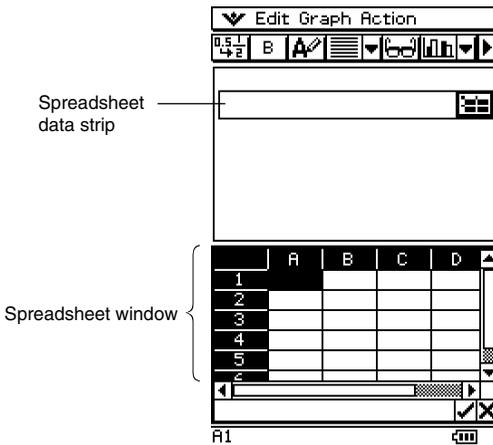
Drag and Drop

After you open Spreadsheet within eActivity, you can drag and drop information between the two application windows.

Example 1: To drag the contents of a single cell from the Spreadsheet window to the eActivity window

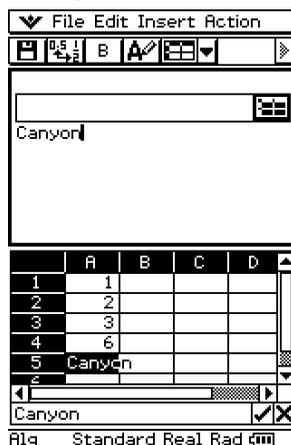
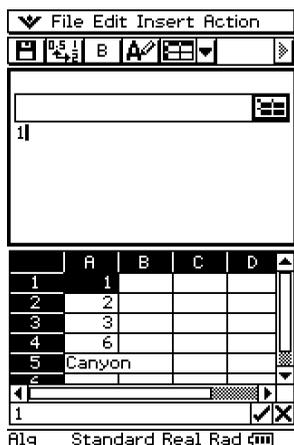
• ClassPad Operation

- (1) Tap  to display the application menu, and then tap  to start the eActivity application.
- (2) From the eActivity application menu, tap [Insert] and then [Spreadsheet].
 - This inserts a Spreadsheet data strip, and displays the Spreadsheet window in the lower half of the screen.



- Note that a Spreadsheet data strip works the same way as the Spreadsheet.
- (3) Input the text or value you want into the Spreadsheet window.

- (4) Select the cell you want and drag it to the first available line in the eActivity window.
- This inserts the contents of the cell in the eActivity window.



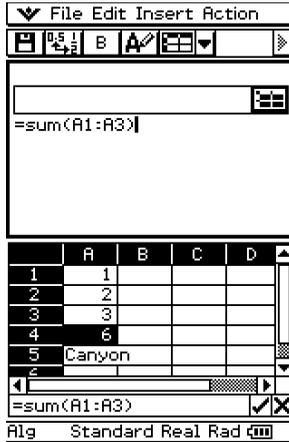
- (5) You can now experiment with the data in the eActivity window.

Example 2: To drag a calculation expression from the Spreadsheet edit box to the eActivity window

• ClassPad Operation

- (1) Tap  to display the application menu, and then tap  to start the eActivity application.
- (2) From the eActivity application menu, tap [Insert] and then [Spreadsheet].
 - This inserts a Spreadsheet data strip, and displays the Spreadsheet window in the lower half of the screen.
- (3) Select a Spreadsheet cell and input the expression you want.
- (4) Tap the edit box to select (highlight) all of the contents of the edit box.

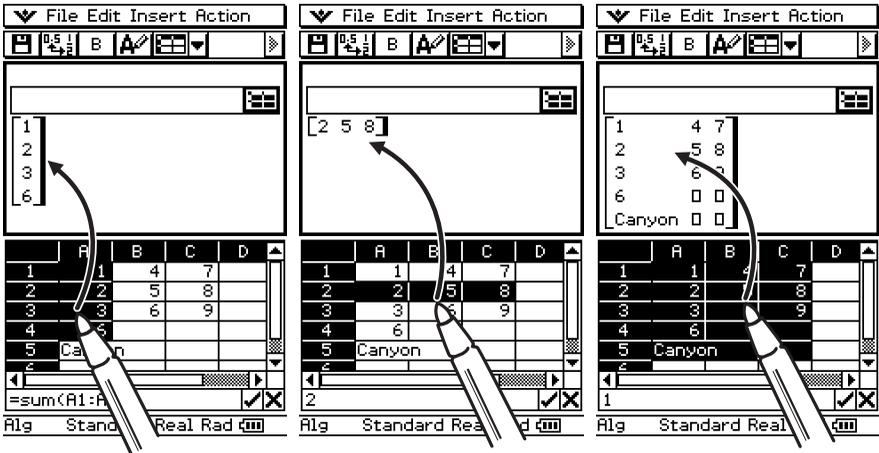
- (5) Drag the contents of the edit box to the first available line in the eActivity window.
- This inserts the contents of the edit box in the eActivity window as a text string.

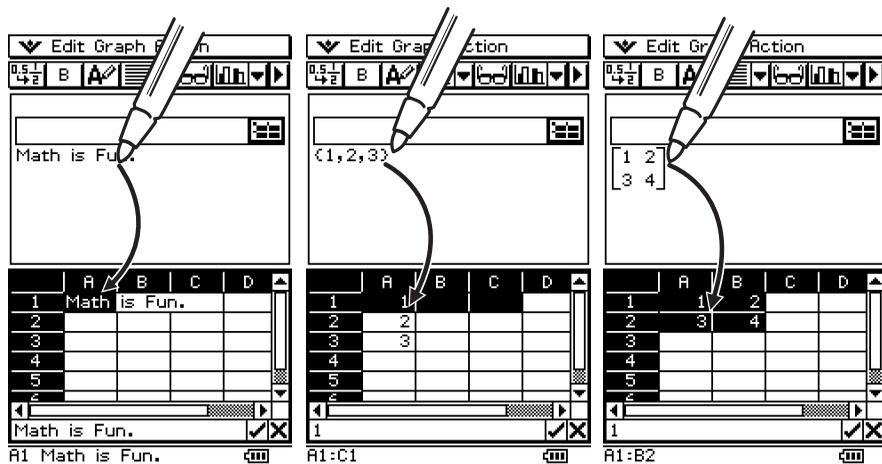


- (6) You can now experiment with the data in the eActivity window.

- The basic operations for the following example are the same for the other examples described above.

Example 3: Dragging multiple Spreadsheet cells to the eActivity window



Example 4: Dragging data from eActivity to the Spreadsheet window

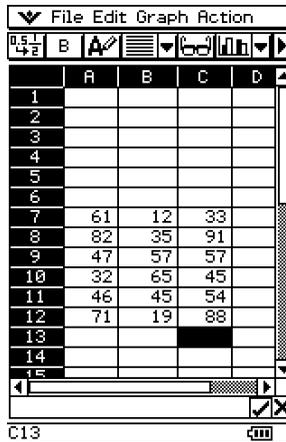
6 Using the Action Menu

Most of the functions that are available from the [Action] menu are similar to those on the [List-Calculation] sub-menu of the standard [Action] menu.

Spreadsheet [Action] Menu Basics

The following example demonstrates the basic procedure for using functions within the [Action] menu.

Example: To calculate the sum of the following data, and then to add 100 to it



	A	B	C	D
1				
2				
3				
4				
5				
6				
7	61	12	33	
8	82	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	54	
12	71	19	88	
13				
14				
15				

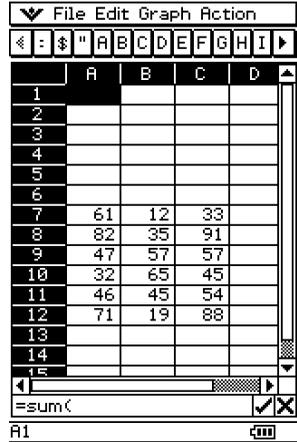
•ClassPad Operation

(1) With the stylus, tap the cell where you want the result to appear.

- In this example, we would tap cell A1.

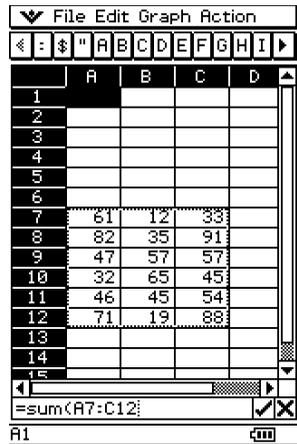
(2) On the [Action] menu, tap [sum].

- This inputs an equal sign and the [sum] function into the edit box.



(3) Use the stylus to drag across the range of data cells from A7 to C12 to select them.

- “A7:C12” appears to the right of the open parenthesis of the [sum] function.



(4) Tap the button to the right of the edit box.

- This automatically closes the parentheses, calculates the sum of the values in the selected range, and displays the result in cell A1.
- You could skip this step and input the closing parentheses by pressing the Ⓜ key on the keypad, if you want.

File Edit Graph Action				
	A	B	C	D
1	940			
2				
3				
4				
5				
6				
7	61	12	33	
8	82	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	54	
12	71	19	88	
13				
14				
15				

=sum(A7:C12)

A1 940

(5) Tap the edit box to activate it again, and then tap to the right of the last parenthesis.

(6) Press the ⊕ key and then input 100.

(7) Tap the button to the right of the edit box.

- This calculates the result and displays it in cell A1.

File Edit Graph Action				
	A	B	C	D
1	1040			
2				
3				
4				
5				
6				
7	61	12	33	
8	82	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	54	
12	71	19	88	
13				
14				
15				

=sum(A7:C12)+100

A1 1040

Action Menu Functions

This section describes how to use each function in the [Action] menu. Please note that start cell:end cell is equivalent to entering a list.

- **min**

Function: Returns the lowest value contained in the range of specified cells.

Syntax: `min(start cell[:end cell][,start cell[:end cell]]/[,value])`

Example: To determine the lowest value in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	12			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

Formula bar: `=min(A7:C12)`

Status bar: A1 12

- **max**

Function: Returns the greatest value contained in the range of specified cells.

Syntax: `max(start cell[:end cell][,start cell[:end cell]]/[,value])`

Example: To determine the greatest value in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	91			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

Formula bar: `=max(A7:C12)`

Status bar: A1 91

● **mean**

Function: Returns the mean of the values contained in the range of specified cells.

Syntax: `mean(start cell:end cell[,start cell:end cell])`

Example: To determine the mean of the values in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	50.4			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

=mean(A7:C12)

A1 50.4444444

● **median**

Function: Returns the median of the values contained in the range of specified cells.

Syntax: `median(start cell:end cell[,start cell:end cell])`

Example: To determine the median of the values in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	46.5			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

=median(A7:C12)

A1 46.5

● **mode**

Function: Returns the mode of the values contained in the range of specified cells.

Syntax: mode(start cell:end cell[,start cell:end cell])

Example: To determine the mode of the values in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	<45 ...			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

Formula bar: =mode(A7:C12)

Cell A1: <45,57>

● **sum**

Function: Returns the sum of the values contained in the range of specified cells.

Syntax: sum(start cell:end cell[,start cell:end cell])

Example: To determine the sum of the values in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	908			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

Formula bar: =sum(A7:C12)

Cell A1: 908

- **prod**

Function: Returns the product of the values contained in the range of specified cells.

Syntax: `prod(start cell:end cell[,start cell:end cell])`

Example: To determine the product of the values in cells A7 and A8, and input the result in cell A1:

	A	B	C	D
1	5561			
2				
3				
4				
5				
6				
7	67			
8	83			
9	47			
10	32			
11	46			
12	71			
13				
14				
15				

Formula bar: `=prod(A7:A8)`

Status bar: A1 5561

- **cuml**

Function: Returns the cumulative sums of the values contained in the range of specified cells.

Syntax: `cuml(start cell:end cell)`

Example: To determine the cumulative sums of the values in cells B1 through B3, and input the result in cell A1:

	A	B	C	D
1	{2, ...	2		
2		4		
3		6		
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Formula bar: `=cuml(B1:B3)`

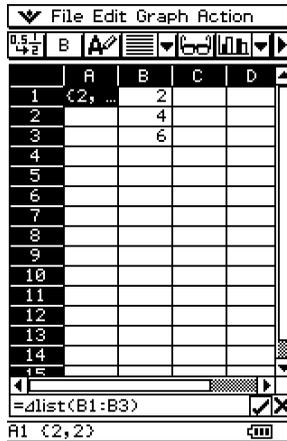
Status bar: A1 {2,6,12}

● **Δlist**

Function: Returns the differences between values in each of the adjacent cells in the range of specified cells.

Syntax: Δlist(start cell:end cell)

Example: To determine the differences of the values in cells B1 through B3, and input the result in cell A1:

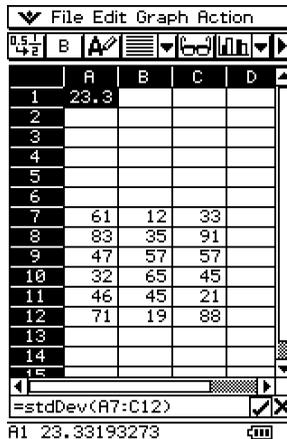


● **stdDev**

Function: Returns the sample standard deviation of the values contained in the range of specified cells.

Syntax: stdDev(start cell:end cell)

Example: To determine the sample standard deviation of the values in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:



- **variance**

Function: Returns the sample variance of the values contained in the range of specified cells.

Syntax: variance(start cell:end cell)

Example: To determine the sample variance of the values in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	544.			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

=variance(A7:C12)

A1 544.379085

- **Q₁**

Function: Returns the first quartile of the values contained in the range of specified cells.

Syntax: Q₁(start cell:end cell[,start cell:end cell])

Example: To determine the first quartile of the values in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	33			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

=Q₁(A7:C12)

A1 33

● **Q₃**

Function: Returns the third quartile of the values contained in the range of specified cells.

Syntax: Q₃(start cell:end cell[,start cell:end cell])

Example: To determine the third quartile of the values in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	65			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				

Formula bar: =Q3(A7:C12)
Cell A1: 65

● **percent**

Function: Returns the percentage of each value in the range of specified cells, the sum of which is 100%.

Syntax: percent(start cell:end cell)

Example: To determine the percentage of the values in cells B1 through B4, and input the result in cell A1:

	A	B	C	D
1	(10,40,30,20)	2		
2		8		
3		6		
4		4		
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

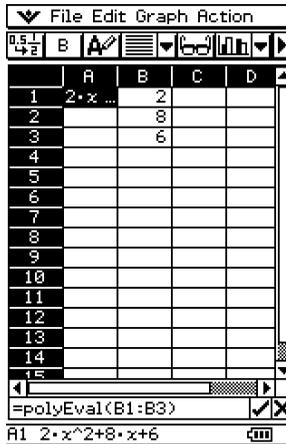
Formula bar: =percent(B1:B4)
Cell A1: (10,40,30,20)

• **polyEval**

Function: Returns a polynomial arranged in descending order. The coefficients correspond sequentially to each value in the range of specified cells.

Syntax: polyEval(start cell:end cell[,start cell:end cell]/[, variable])

Example: To create a second degree polynomial with coefficients that correspond to the values in cells B1 through B3, and input the result in cell A1:



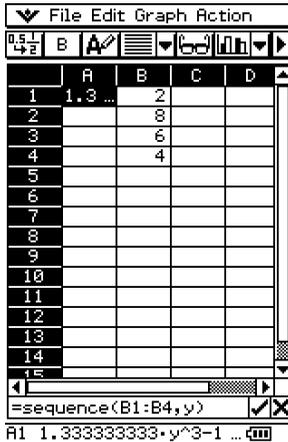
- “x” is the default variable when you do not specify one above.
- To specify “y” as the variable, for example, enter “=polyEval(B1:B3,y)”.

● **sequence**

Function: Returns the lowest-degree polynomial that generates the sequence expressed by the values in a list or range of specified cells. If we evaluate the polynomial at 2, for example, the result will be the second value in our list.

Syntax: `sequence(start cell:end cell[,start cell:end cell][, variable])`

Example: To determine a polynomial for the sequence values in cells B1 through B4 and a variable of “y”, and input the result in cell A1:



- “x” is the default variable when you do not specify one above.

• sumSeq

Function: Determines the lowest-degree polynomial that generates the sum of the first n terms of your sequence. If we evaluate the resulting polynomial at 1, for example, the result will be the first value in your list. If we evaluate the resulting polynomial at 2, the result will be the sum of the first two values in your list.

When two columns of values or two lists are specified, the resulting polynomial returns a sum based on a sequence.

Syntax: `sumSeq(start cell:end cell[,start cell:end cell][, variable])`

Example: To determine a polynomial that generates the sum of the first n terms for the sequence expressed by the values in cells B1 through B4 with a variable of “y”, and input the result in cell A1:

	A	B	C	D
1	0.3 ...	2		
2		8		
3		6		
4		4		
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Formula bar: `=sumSeq(B1:B4, y)`

Cell A1: `0.3333333333*y^4- ...`

- “x” is the default variable when you do not specify one above.

● **row**

Function: Returns the row number of a specified cell.

Syntax: row(cell)

Example: To determine the row number of cell A7 and input the result in cell A1:

	A	B	C	D
1	7			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

Formula bar: =row(A7)

Status bar: A1 7

● **col**

Function: Returns the column number of a specified cell.

Syntax: col(cell)

Example: To determine the column number of cell C9 and input the result in cell A1:

	A	B	C	D
1	3			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

Formula bar: =col(C9)

Status bar: A1 3

- **count**

Function: Returns a count of the number of cells in the specified range.

Syntax: count(start cell[:end cell])

Example: To count the number of cells in the block whose upper left corner is located at A7 and whose lower right corner is located at C12, and input the result in cell A1:

	A	B	C	D
1	18			
2				
3				
4				
5				
6				
7	61	12	33	
8	83	35	91	
9	47	57	57	
10	32	65	45	
11	46	45	21	
12	71	19	88	
13				
14				
15				

=count(A7:C12) ✓ X

A1 18 



7 Formatting Cells and Data

This section explains how to control the format of the spreadsheet and the data contained in the cells.

Standard (Fractional) and Decimal (Approximate) Modes

You can use the following procedure to control whether a specific cell, row, or column, or the entire spreadsheet should use the standard mode (fractional format) or decimal mode (approximate value).

• ClassPad Operation

- (1) Select the cell(s) whose format you want to specify.
 - See “Selecting Cells” on page 3-5 for information about selecting cells.
- (2) On the toolbar, tap the left button ( / ) to toggle between the standard mode and the decimal mode.

Plain Text and Bold Text

Use the following procedure to toggle the text of a specific cell, row, or column, or the entire spreadsheet between plain and bold.

• ClassPad Operation

- (1) Select the cell(s) whose text setting you want to specify.
 - See “Selecting Cells” on page 3-5 for information about selecting cells.
- (2) On the toolbar, tap the  /  button to toggle between bold and plain text.

Text and Calculation Data Types

Make use of the following procedure to toggle a specific cell, row, or column, or the entire spreadsheet for either text or calculation data types.

• ClassPad Operation

- (1) Select the cell(s) whose format you want to specify.
 - See “Selecting Cells” on page 3-5 for information about selecting cells.
- (2) On the toolbar, tap the  /  button to toggle between Text Input mode and Calculation Input mode.



Text Alignment

With the following procedure, you can specify justified, align left, center, or align right for a specific cell, row, or column, or the entire spreadsheet.

• ClassPad Operation

- (1) Select the cell(s) whose alignment setting you want to specify.
 - See “Selecting Cells” on page 3-5 for information about selecting cells.
- (2) On the toolbar, tap the down arrow button next to the  button.
- (3) On the button menu that appears, tap the text alignment option you want to use.

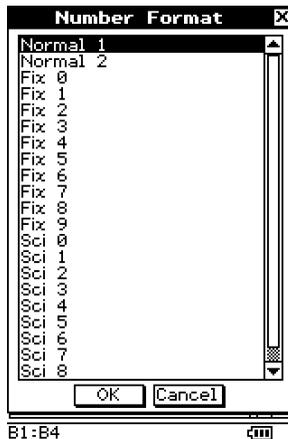
For this type of alignment:	Tap this option:
Left and right justified	
Left	
Center	
Right	

Number Format

Use the following procedure to specify the number format (Normal 1, Normal 2, Fix 0 – 9, Sci 0 – 9) of a specific cell, row, or column, or the entire spreadsheet.

• ClassPad Operation

- (1) Select the cell(s) whose number format setting you want to specify.
 - See “Selecting Cells” on page 3-5 for information about selecting cells.
- (2) On the [Edit] menu, tap [Number Format].



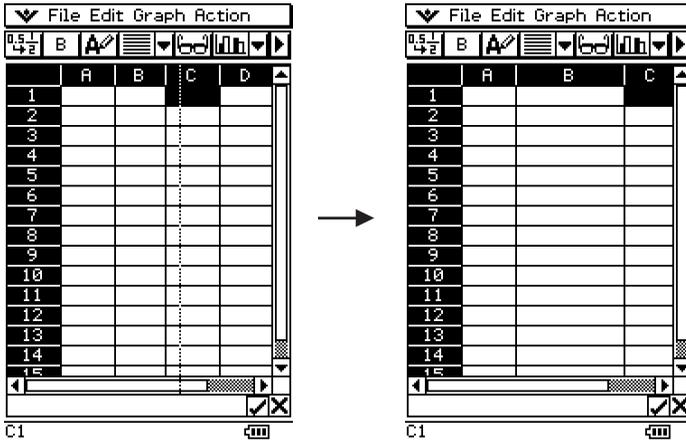
- (3) On the dialog box that appears, select the number format you want to use.
- (4) Tap [OK].

Changing the Width of a Column

There are three different methods you can use to control the width of a column: dragging with the stylus, using the [Column Width] command, or using the [AutoFit Selection] command.

- **To change the width of a column using the stylus**

Use the stylus to drag the edge of a column header left or right until it is the desired width.

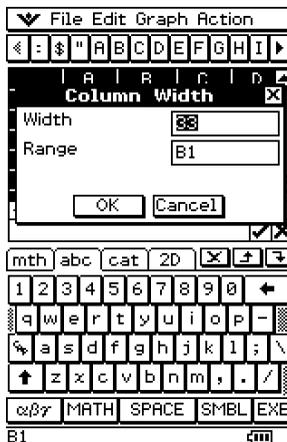


- **To change the width of a column using the Column Width command**

(1) Tap any cell in the column whose width you want to change.

- You could also drag the stylus to select multiple columns, if you want.

(2) On the [Edit] menu, tap [Column Width].

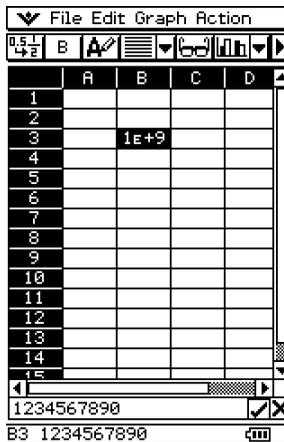


- (3) On the dialog box that appears, enter a value in the [Width] box to specify the desired width of the column in pixels.
- You can also use the [Range] box to specify a different column from the one you selected in step (1) above, or a range of columns. Entering B1:D1 in the [Range] box, for example, will change columns B, C, and D to the width you specify.
- (4) After everything is the way you want, tap [OK] to change the column width.

• To change the width of a column using the AutoFit Selection command

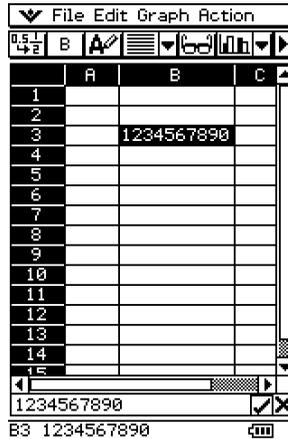
Example: To use [AutoFit Selection] to adjust the column width to display the value 1234567890

- (1) Tap a cell and input the value.



- Since the value is too long to fit in the cell, it is converted automatically to exponential format. Notice, however, that the entire value appears in the edit box.
- (2) Select the cell you want to auto fit.
- You can also select a range of cells in the same column or an entire column. In this case, the column width is adjusted to fit the largest data value in the column.
 - You can also select a range of cells or an entire row. In this case, each column width is adjusted to fit the largest data in its column.

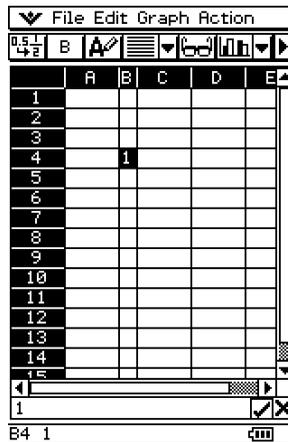
(3) On the [Edit] menu, tap [AutoFit Selection].



The screenshot shows a spreadsheet application window with a menu bar (File, Edit, Graph, Action) and a toolbar. The spreadsheet grid has columns A, B, and C, and rows 1 through 15. Cell B3 contains the long number "1234567890". The status bar at the bottom shows "B3 1234567890".

	A	B	C
1			
2			
3		1234567890	
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

- This causes the column width to be adjusted automatically so the entire value can be displayed.
- Note that [AutoFit Selection] also will reduce the width of a column, if applicable. The following shows what happens when [AutoFit Selection] is executed while a cell that contains a single digit is selected.



The screenshot shows the same spreadsheet application window. The grid now has columns A, B, C, D, and E, and rows 1 through 15. Cell B4 contains the single digit "1". The status bar at the bottom shows "B4 1".

	A	B	C	D	E
1					
2					
3					
4		1			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

8 Graphing

The Spreadsheet application lets you draw a variety of different graphs for analyzing data. You can combine line and column graphs, and the interactive editing feature lets you change a graph by dragging its points on the display.

Graph Menu

After selecting data on the spreadsheet, use the [Graph] menu to select the type of graph you want to draw. You can also use the [Graph] menu to specify whether to graph data by column or row.

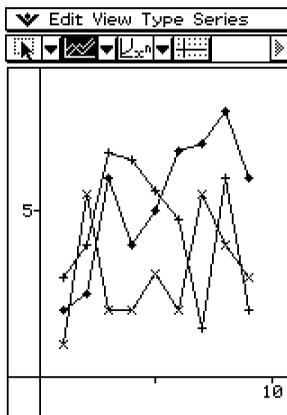
The following explains each of the [Graph] menu commands, and shows examples of what happens to the Graph window when you execute a command.

Note

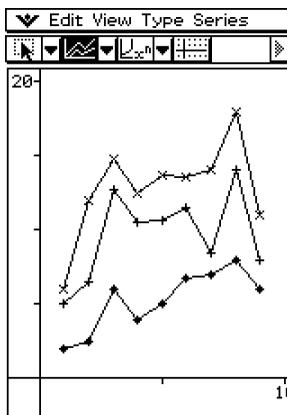
- The following examples show the appearance of graph screens after tapping  on the icon panel so the Graph window fills the entire screen.
- Each command is followed by a button in parentheses to show the graph toolbar button that performs the same action as the command.



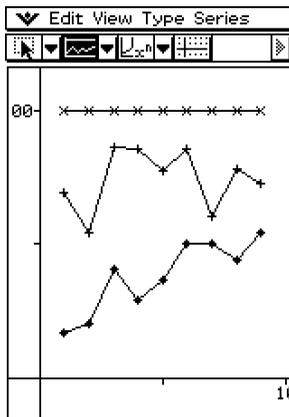
- [Graph] - [Line] - [Clustered] ()



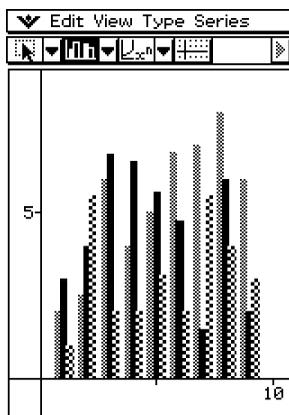
- [Graph] - [Line] - [Stacked] ()



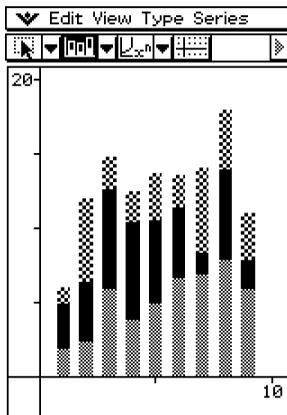
- [Graph] - [Line] - [100% Stacked] ()



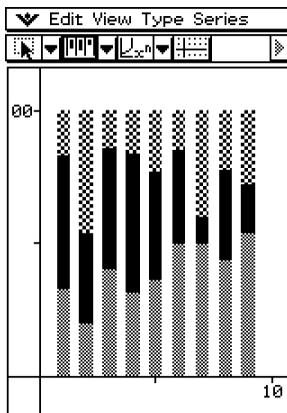
- [Graph] - [Column] - [Clustered] ()



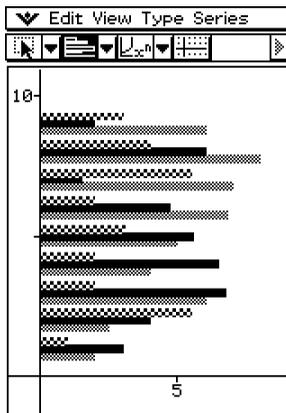
- [Graph] - [Column] - [Stacked] ()



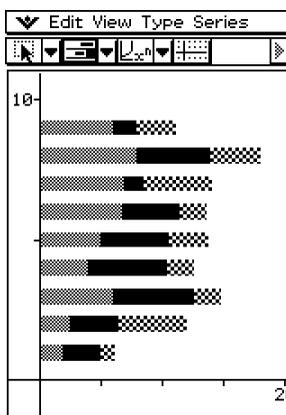
- [Graph] - [Column] - [100% Stacked] ()



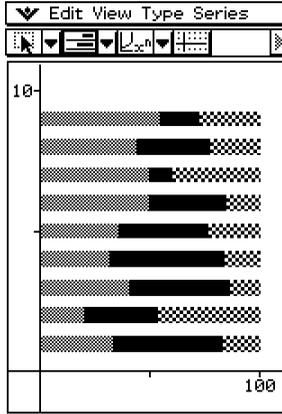
• [Graph] - [Bar] - [Clustered] ()



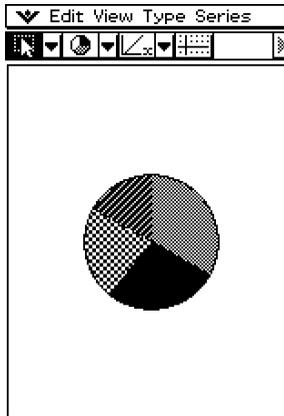
• [Graph] - [Bar] - [Stacked] ()



• [Graph] - [Bar] - [100% Stacked] ()



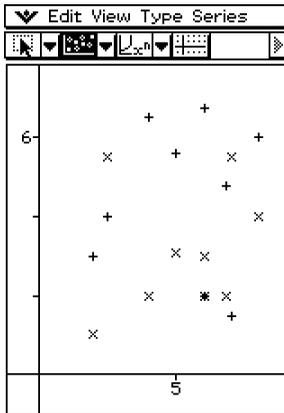
• [Graph] - [Pie] ()



- When you select a pie chart, only the first series (row or column) of the selected data is used.
- Tapping any of the sections of a pie graph causes three values to appear at the bottom of the screen: the cell location, a data value for the section, and a percent value that indicates the portion of the total data that the data value represents.



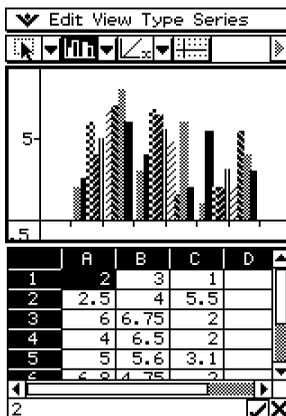
• [Graph] - [Scatter] ()



- In the case of a scatter graph, the first series (column or row) of selected values is used as the x -values for all plots. The other selected values are used as the y -value for each of the plots. This means if you select four columns of data (like Columns A, B, C, and D), for example, there will be three different plot point types: (A, B), (A, C), and (A, D).
- Scatter graphs initially have plotted points only. You can add lines by selecting [Lines] on the [View] menu.

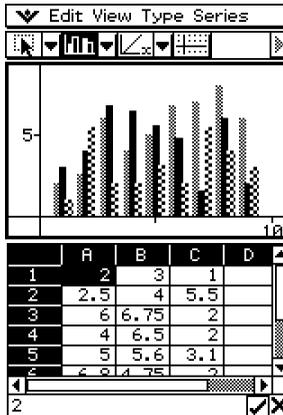
• [Graph] - [Row Series]

Selecting this option treats each row as a set of data. The value in each column is plotted as a vertical axis value. The following shows a graph of the same data as the above example, except this time [Row Series] is selected.



• **[Graph] - [Column Series]**

Selecting this option treats each column as a separate set of data. The value in each row is plotted as a vertical axis value. The following shows a typical clustered column graph while [Column Series] is selected, and the data that produced it.



Graph Window Menus and Toolbar

The following describes the special menus and toolbar that appears whenever the Spreadsheet application Graph window is on the display.

■ **▼ Menu**

- See “Using the ▼ Menu” on page 1-5-4 of your ClassPad 300 User’s Guide.

■ **Edit Menu**

- See “Edit Menu” on page 2-1 of this User’s Guide.

■ View Menu

Many of the [View] menu commands can also be executed by tapping Spreadsheet application Graph window toolbar buttons.

To do this:	Tap this toolbar button:	Or select this [View] menu item:
Change the function of the stylus so it can be used to select and move points on the displayed graph		Select
Start a box zoom operation		Zoom Box
Activate the pan function for dragging the Graph window with the stylus		Pan
Enlarge the display image		Zoom In
Reduce the size of the display image		Zoom Out
Adjust the size of the display image so it fits the display		Zoom to Fit
Toggle display of axes and coordinate values on and off		Toggle Axes
Toggle line graph and scatter graph plot markers on and off	—	Markers
Toggle line graph and scatter connecting lines on and off	—	Lines

■ Type Menu

- The [Type] menu is identical to the [Graph] menu described on page 8-1.

■ Series Menu

All of the [Series] menu commands can also be executed by tapping a Graph window toolbar button.

- All of the [Series] menu operations are available only when there is a clustered line graph or a clustered column graph on the Graph window.
- In all of the following cases, you first need to tap a plot point or a column to specify which data you want to use for the operation you are about to perform.

To do this:	Tap this toolbar button:	Or select this [Series] menu item:
Display a linear regression curve		Trend - Linear
Display a quadratic regression curve		Trend - Polynomial - Quadratic
Display a cubic regression curve		Trend - Polynomial - Cubic
Display a quartic regression curve		Trend - Polynomial - Quartic
Display a quintic regression curve		Trend - Polynomial - Quintic
Display an exponential Ae^{Bx} regression curve		Trend - Exponential
Display a logarithmic $A\ln(x) + B$ regression curve		Trend - Logarithmic
Display a power Ax^B regression curve		Trend - Power
Convert the data of the selected column to a line graph		Line
Convert the data of the selected line to a column graph		Column

Important!

- Exponential and logarithmic regression curves ignore negative values when calculating the curve. A message appears in the status bar to let you know when negative values are ignored.



Basic Graphing Steps

The following are the basic steps for graphing spreadsheet data.

• ClassPad Operation

(1) Input the data you want to graph into the spreadsheet.

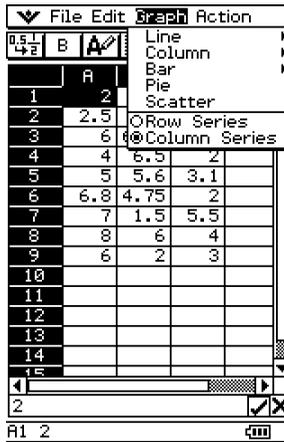
	A	B	C	D
5	5	5.6	3.1	
6	6.8	4.75	2	
7	7	1.5	5.5	
8	8	6	4	
9	6	2	3	
10				
11				
12				
13				
14				
15				
16				
17				
18				

(2) Use the [Graph] menu to specify whether you want to graph the data by row or by column.

To do this:	Select this [Graph] menu option:
Graph the data by row	Row Series
Graph the data by column	Column Series

- See “Graph Menu” on page 8-1 for more information.
- (3) Select the cells that contain the data you want to graph.
- See “Selecting Cells” on page 3-5 for information about selecting data.

- (4) On the [Graph] menu, select the type of graph you want to draw. Or you can tap the applicable icon on the toolbar.



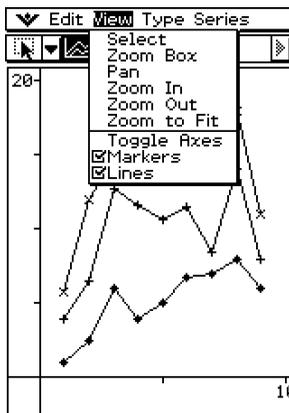
- This draws the selected graph. See “Graph Menu” on page 8-1 for examples of the different types of graphs that are available.
- You can change to another type of graph at any time by selecting the graph type you want on the [Type] menu. Or you can tap the applicable icon on the toolbar.

Other Graph Window Operations

This section provides more details about the types of operations you can perform while the Graph window is on the display.

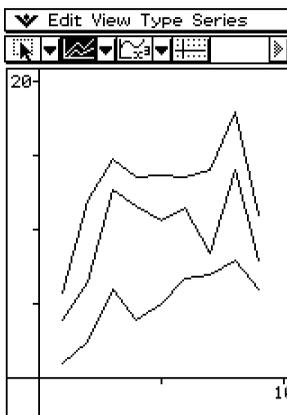
• To show or hide lines and markers

- (1) While a line graph or a scatter graph is on the Graph window, tap the [View] menu.

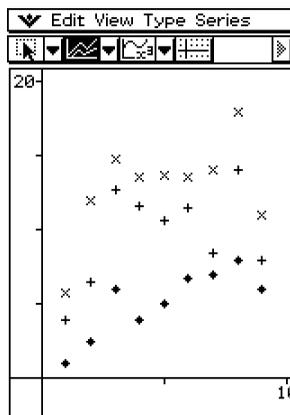


Lines and markers both turned on

- (2) Tap the [Markers] or [Lines] item to toggle it between show (checkbox selected) and hide (checkbox cleared).



Lines turned on, markers hidden

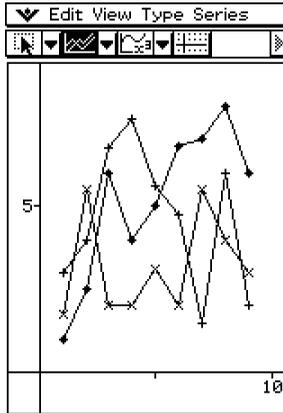


Markers turned on, lines hidden

- Line and scatter graphs can have markers only, lines only, or both markers and lines. You cannot turn off both markers and lines at the same time.

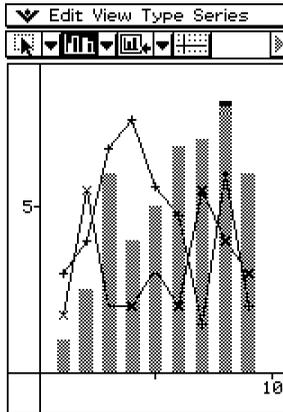
• **To change a line in a clustered line graph to a column graph**

(1) Draw the clustered line graph.



(2) With the stylus, tap any data point on the line you wish to change to a column graph.

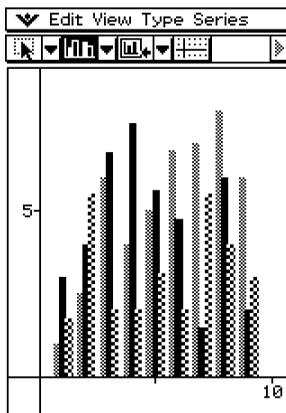
(3) On the [Series] menu, tap [Column].



- You could also tap the down arrow button next to the third tool button from the left, and then tap .
- You can change more than one line to a column graph, if you want.
- You can change a column graph back to a line graph by selecting one of its columns and tapping [Line] on the [Series] menu.

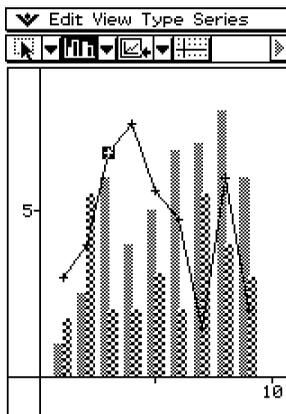
• **To change a column in a clustered column graph to a line**

(1) Draw the clustered column graph.



(2) With the stylus, tap any one of the columns you wish to change to a line graph.

(3) On the [Series] menu, tap [Line].

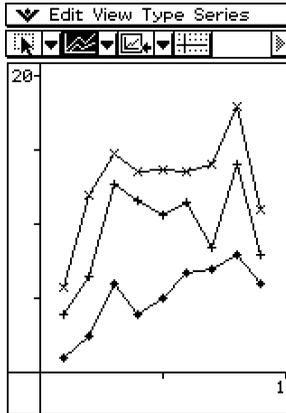


- You could also tap the down arrow button next to the third tool button from the left, and then tap .
- You can change more than one column to a line graph, if you want.
- You can change a line graph back to a column graph by selecting one of its data points and tapping [Column] on the [Series] menu.

• **To display a regression curve**

(1) Draw a clustered line graph or clustered column graph.

- A regression curve can be drawn for a line, column, or scatter graph only.

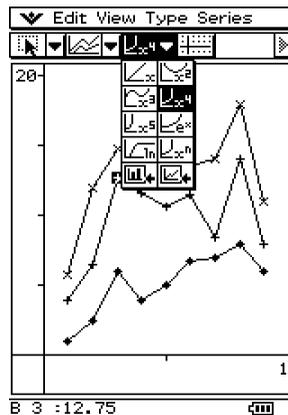
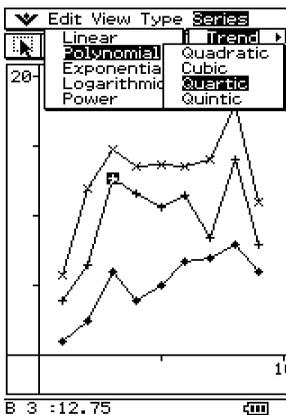


- The above shows a stacked line graph.

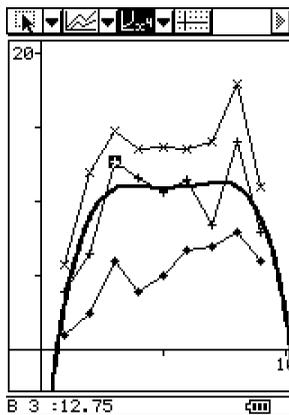
(2) With the stylus, tap any point of the data for which you want to draw the regression curve.

(3) Use the [Series] menu to select the type of regression curve you want.

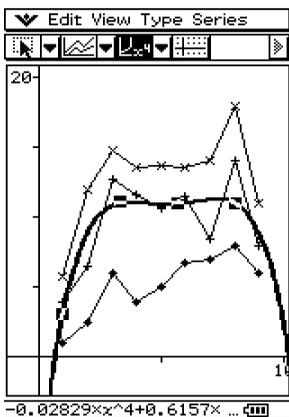
- You could also tap the down arrow button next to the third tool button from the left, and tap an icon to select the regression curve type.
- See “Series Menu” on page 8-9 for information about regression curve types.
- Here, we will select quartic regression.



- This causes the applicable regression curve to appear in the Graph window.



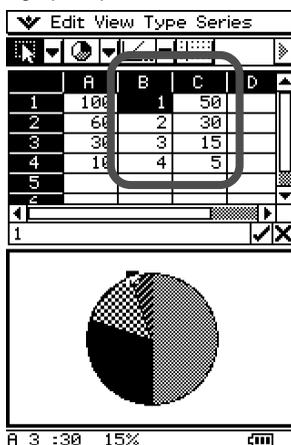
- Tapping the regression curve selects it and displays its equation in the status bar.
- You can drag and drop the regression curve to a cell or the edit box in the Spreadsheet window.



- To delete all displayed regression curves, select [Clear All] on the [Edit] menu.
- Note that regression curves are also deleted automatically if you change to another graph style.

• **To find out the percentage of data for each pie graph section**

- (1) While the display is split between the pie graph and the Spreadsheet windows, tap the pie graph to select it.
- (2) On the [Edit] menu, tap [Copy].
- (3) Tap the Spreadsheet window to make it active.
- (4) Tap the cell where you want to paste the data.
 - The cell you tap will be the upper left cell of the group of cells that will be pasted.
- (5) On the [Edit] menu, tap [Paste].
 - This pastes two columns of values. The numbers in the left column are pie graph section numbers. The values in the right column are the percentages that the data in each section of the pie graph represents.



• **To change View Window settings**

- (1) While a graph is on the Graph window, tap , [Settings], and then [View Window].
 - This displays the current View Window settings.
- (2) Change the View Window settings, if you want.
 - See “Configuring View Window Parameters for the Graph Window” on page 3-2-1 of the ClassPad 300 User’s Guide for information about using the View Window.
- (3) After the settings are the way you want, tap [OK] to apply them.

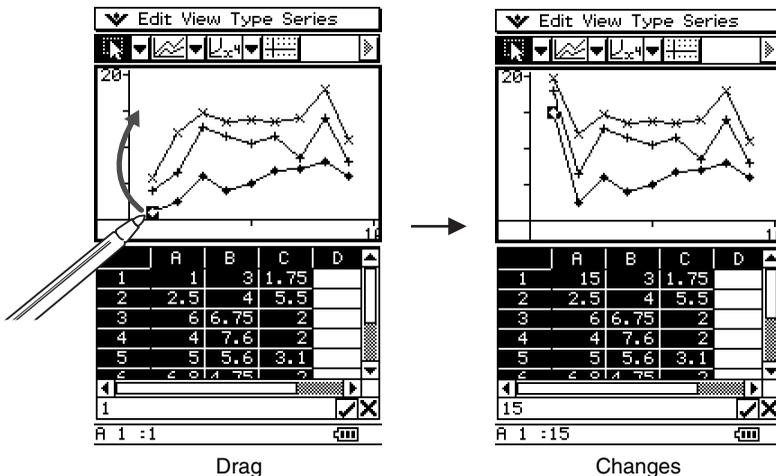
• **To change the appearance of the axes**

While a graph is on the Graph window, select [Toggle Axes] on the [View] menu or tap the  toolbar button to cycle through axes settings in the following sequence: axes on → axes and values on → axes and values off →.

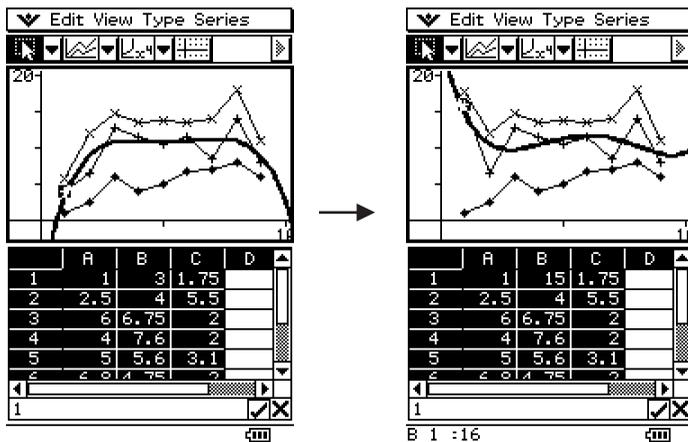
• **To change the appearance of a graph by dragging a point**

While a graph is on the Graph window, use the stylus to drag any one of its data points to change the configuration of the graph.

- You can change curves, make bars or columns longer or shorter, or change the size of pie graph sections.
- Changing a graph automatically changes the graph's data on the Spreadsheet window.



- If a regression curve is displayed for the data whose graph is being changed by dragging, the regression curve also changes automatically in accordance with the drag changes.
- When you edit data in the spreadsheet and press **Esc**, your graph will update automatically.



Important!

- You can drag a point only if it corresponds to a fixed value on the spreadsheet. You cannot drag a point if it corresponds to a formula.

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