

# CellSheet™

## CATEGORY

TOOL

## DESCRIPTION

CellSheet combines spreadsheet functionality with the power of the TI-83/84 Plus. CellSheet can be useful in classes other than math, such as social studies, business, and science.



## DIDACTICAL SUGGESTIONS

CellSheet can be used as a tool to perform spreadsheet calculations with data collected by a real data collection device, and also as a means to help develop conceptual understanding.

- Cells can contain:
- Integers
  - Real numbers
  - Formulas
  - Variables
  - Text and numeric strings
  - Functions

Each spreadsheet contains 999 rows and 26 columns. The amount of data you can enter is limited only by the available RAM on your TI-83/84 Plus. With the following screenshots we give a brief overview of the possibilities of CellSheet.

```
CELLSHEET MENU
1:File...
2:Edit...
3:Options...
4:Charts...
5:Help
6:Quit CellSheet
```

MAIN MENU

```
FILE
1:Open...
2:Save As...
3:New...
4>Delete...
5:Format...
6:Recalc
```

FILE MENU

```
FORMAT
AutoCalc: [Y] N
Cursor Mvmt: [D] →
Init Help: [Y] N
Show: [F1] [F2] VALUE
Enter
```

VARIOUS FORMATS

```
EDIT
1:Go To Cell...
2:Undelete Cell
3:Clear Sheet...
4>Select Range...
5:Cut ..... F2
6:Copy ..... F3
7:Paste ..... F4
```

EDIT COMMANDS

```
OPTIONS
1:Statistics...
2:Fill Range...
3:Sequence...
4:Import/Export...
5:Sort...
6:Col Decimal...
```

OPTIONS MENU

```
STATISTICS
1:1-Var Stats...
2:2-Var Stats...
3:LinReg(ax+b)...
```

STATISTICS

```
FILL RANGE
Range: [ ]
Formula:
Enter
```

RANGES

```
SEQUENCE
1st Cell:A1
seq(X,X,1,10)
[Down] Right
Enter
```

SEQUENCES

### Example 1

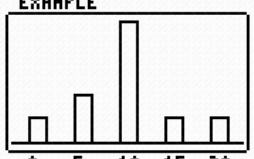
We use a simple chart with data on the number of points (column A) people scored on a quiz. Column B represents the frequency of each score. We show a bar graph and a pie graph.

GPD	A	B	C
1	0	2	
2	5	4	
3	10	10	
4	15	2	
5	20	2	
6			

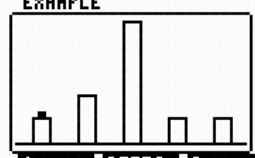
CHARTS  
 1: Scatter...  
 2: Scatter Window  
 3: Line...  
 4: Line Window...  
 5: Bar...  
 6: Bar Window...  
 7: Pie...

BAR CHART  
 Categories: A1:A5  
 Series1: B1:B5  
 Ser1Name: NOTES  
 Series2:  
 Ser2Name:  
 ↓

EXAMPLE

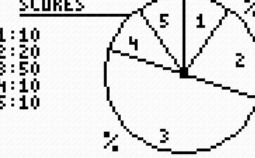


EXAMPLE

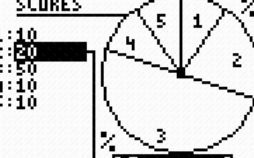


PIE CHART  
 Categories: A1:A5  
 Series: B1:B5  
 Number Percent  
 Title: SCORES  
 Draw

SCORES



SCORES



### Example 2

Suppose we can describe a falling object with the function  $x(t) = 5t^2$ . We will approximate the instantaneous velocity  $v(t) = \frac{dx(t)}{dt}$  by the average velocity  $v_{av} = \frac{x(t+h) - x(t)}{h}$  at  $t = 5$ .

First we define the function variable  $Y1 = 5X^2$ .

VEL	A	B	C
1	H		
2	.1		
3	.01		
4	.001		
5	1E-4		
6	1E-5		

VEL	A	B	C
1	H	XCT+H)	
2	.1	130.05	
3	.01		
4	.001		
5	1E-4		
6	1E-5		

VEL	A	B	C
1	H	XCT+H)	
2	.1	130.05	
3	.01		
4	.001		
5	1E-4		
6	1E-5		

VEL	A	B	C
1	H	XCT+H)	
2	.1	130.05	
3	.01		
4	.001		
5	1E-4		
6	1E-5		

Select B2 and Copy (F3)                      Select B3 and select Range B3:B6 (F1+▼)

VEL	A	B	C
1	H	XCT+H)	
2	.1	130.05	
3	.01	125.5	
4	.001	125.05	
5	1E-4	125.01	
6	1E-5	125	

VEL	A	B	C
1	H	XCT+H)	V
2	.1	130.05	50.5
3	.01	125.5	
4	.001	125.05	
5	1E-4	125.01	
6	1E-5	125	

VEL	A	B	C
1	H	XCT+H)	V
2	.1	130.05	50.5
3	.01	125.5	50.05
4	.001	125.05	50.005
5	1E-4	125.01	50.001
6	1E-5	125	50

Paste (F4)                      Copy formula in C2 to range C3:C6

### POINT OF VIEW

CellSheet is a simple spreadsheet application for the graphing calculator. Because of the small screen and the sometimes time consuming way to enter information and scroll over the spreadsheet it is not the most user friendly application. When a computer is at hand, a spreadsheet program like Excel is much easier.

However, when no computer is available (e.g. in a "normal" classroom or on a field trip with data collection devices) CellSheet can be very helpful. For relatively small spreadsheets and quick calculations, the application can be used as well. And to present the data you can still use Excel because a free CellSheet converter to Excel and vice versa is available.