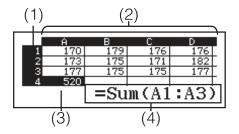# Spread Sheet Activity

The Spreadsheet mode is useful for studying the statistics of data that require more than two lists. It also supports recursive formulas, sequences, and series.
From the Main Menu, use the arrow keys to highlight the Spreadsheet icon, then press ⊟or press ⑧.

The Spreadsheet Mode makes it possible to perform calculations using a 45-row × 5column (cell A1 to E45) spreadsheet.

(1) Row numbers (1 to 45)
(2) Column letters (A to E)
(3) Cell cursor: Indicates the currently selected cell.
(4) Edit box: Shows the contents of the cell where the cell cursor is currently located.

In the Spreadsheet Mode, the commands below can be used inside formulas or constants. These command are on the menu that appears when you press OPTN.

Min(	Returns the minimum of the values in a specified range of cells. Syntax: Min(start cell:end cell)
Max(	Returns the maximum of the values in a specified range of cells. Syntax: Max(start cell:end cell)
Mean(	Returns the mean of the values in a specified range of cells. Syntax: Mean(start cell:end cell)
Sum(	Returns the sum of the values in a specified range of cells. Syntax: Sum(start cell:end cell)

The following illustration will cover almost all possible explorations of the spreadsheet feature of Classwiz

Activity:
A machine throws ping pong balls covering the distance of 300m. 10 balls are thrown with the initial velocity of 18 km/h with the addition of 9 km/h for each ball. Create a table for time in minutes for each ball. Also find maximum, minimum and average and total time taken by the balls.
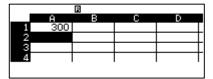
Prepared by:
Muhammad Asad Ali

CASIO CLASSWIZ 991EX SPREADSHEET ACTIVITY

Solution:

Distance (m)	Speed (Km/H)	Speed (m/s)	Time (seconds)	Time (minutes)
300	18	5	60	1
300	27	7.5	40	0.666666667
300	36	10	30	0.5
300	45	12.5	24	0.4
300	54	15	20	0.333333333
300	63	17.5	17.14285714	0.285714286
300	72	20	15	0.25
300	81	22.5	13.33333333	0.222222222
300	90	25	12	0.2

Solution using Classwizz 991Ex

Go to spread sheet by pressing MENU 8

In A1 type in 300 and press =

To fill 300 from A1 to A10 press OPTN 2 (Fill value) and enter the values as shown below using cursor keys

Now in B1 we need to in type the first speed in Km/h, Highlight the cursor to B1 and type in 18

To fill the columns with the addition of 9 to each value, highlight B2 and press OPTN 3 (Fill formula) and enter the values as shown below (to Type B, press ALPHA ∘⁹⁹⁹)

Now we need to convert the values in B1 to B10 to m/s. We will use conversion tool of calculator and fill the same formula till C10.

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CASIO CLASSWIZ 991EX SPREADSHEET ACTIVITY

To do this highlight the cursor to C1 and press
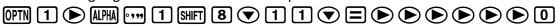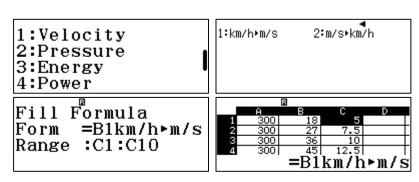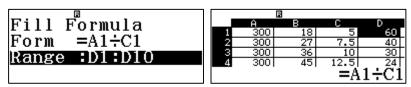
[OPTN] [1] [▶] [ALPHA] [°'''] [1] [SHIFT] [8] [▼] [1] [1] [▼] [=] [▶] [▶] [▶] [▶] [▶] [▶] [0]

```
1:Velocity          1:km/h▸m/s     2:m/s▸km/h
2:Pressure
3:Energy
4:Power
```

```
Fill Formula              A    B    C    D
Form  =B1km/h▸m/s      1  300   18    5
Range :C1:C10         2  300   27   7.5
                      3  300   36   10
                      4  300   45  12.5
                              =B1km/h▸m/s
```
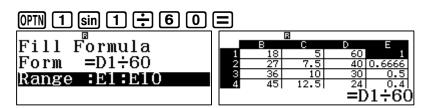
Now we need to find time. As we know $speed = \frac{distance}{time}$ so,

$$time = \frac{distance}{speed}$$

Which shows that we can find the time by dividing distance (Column A values) by speed (Column C values). To do this we need to fill the division formula in Cell D1 and fill it out till D10. Press [OPTN] [1] [ALPHA] [(−)] [1] [÷] [ALPHA] [x³] [1] [=]

```
Fill Formula              A    B    C    D
Form  =A1÷C1           1  300   18    5   60
Range :D1:D10         2  300   27   7.5  40
                      3  300   36   10   30
                      4  300   45  12.5  24
                              =A1÷C1
```

But colum D is giving answers in seconds, and the question requires to answer in minutes. To do this, we need to make a new colum E and divide D column values by 60. Highlight E1 and press the following keys to fill the formula of coversion from E1 to E10

[OPTN] [1] [sin] [1] [÷] [6] [0] [=]

```
Fill Formula              B    C    D     E
Form  =D1÷60          1  18    5    60    1
Range :E1:E10        2  27   7.5   40  0.6666
                     3  36    10   30   0.5
                     4  45  12.5   24   0.4
                              =D1÷60
```

Now we Apply Sum, Mean, Min and Max formula on E1 to E10 to find the respective requirements.

Finding Sum at Cell E11
At E11 press the following keys

[ALPHA] [CALC] [OPTN] [▼] [4] [ALPHA] [cos] [1] [ALPHA] [⌷] [ALPHA] [cos] [1] [0] [)] [=]

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CASIO CLASSWIZ 991EX SPREADSHEET ACTIVITY

	1:Min
	2:Max
	3:Mean
	4:Sum

	B	C	D	E
8	81	22.5	13.333	0.2222
9	90	25	12	0.2
10	99	27.5	10.909	0.1818
11				
=Sum(E1:E10)				

	B	C	D	E
9	90	25	12	0.2
10	99	27.5	10.909	0.1818
11				4.0397
12				

Finding Minimum Value at Cell E12

At E12 press the following keys

ALPHA CALC OPTN ▼ 1 ALPHA COS 1 ALPHA ⌨ ALPHA COS 1 0) =

	B	C	D	E
9	90	25	12	0.2
10	99	27.5	10.909	0.1818
11				4.0397
12				
=Min(E1:E10)|				

	B	C	D	E
10	99	27.5	10.909	0.1818
11				4.0397
12				0.1818
13				

Finding Maximum at Cell E13

At E13 press the following keys

ALPHA CALC OPTN ▼ 2 ALPHA COS 1 ALPHA ⌨ ALPHA COS 1 0) =

	B	C	D	E
10	99	27.5	10.909	0.1818
11				4.0397
12				0.1818
13				
=Max(E1:E10)				

	B	C	D	E
11				4.0397
12				0.1818
13				1
14				

Finding Average at Cell E14

At E14 press the following keys

ALPHA CALC OPTN ▼ 3 ALPHA COS 1 ALPHA ⌨ ALPHA COS 1 0)

	B	C	D	E
11				4.0397
12				0.1818
13				1
14				
=Mean(E1:E10)|				

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