Trapezium Rule-3

Select LIST mode from the main menu by using the arrow keys to highlight the LIST icon or pressing 4.

Note: Area = $^1/_2 h[y_0 + 2y_1 + 2y_2 + \ldots\ldots 2y_{n-1} + y_n]$

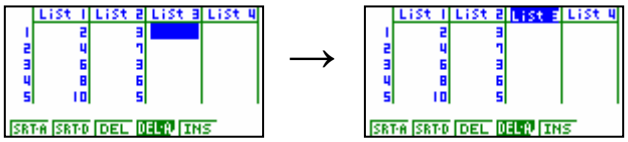
Where $h = \frac{x_n - x_0}{n}$

Also known as the trapezoidal rule

Example: Calculate the area bounded by the following data.

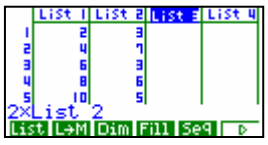
X	2	4	6	8	10	12	14
Y	3	7	3	6	5	7	9

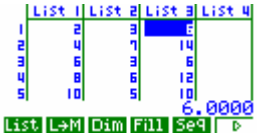
Answer: Enter **LIST** mode and enter in the X values in **List 1** space and in the Y values in **List 2** space.

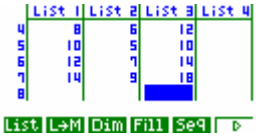


Move the cursor to 'sit' on top of the List 3 space as indicated in the screensnap.

Then press **OPTN F1** then type **2 x** then press **F1 2** to get **2xList 2** on the screen, then press **EXE**







Reading off the required values from **List 2 only**

Area = ½ x 2 x [3+ 2x7 + 2x3 + 2x6 + 2x5 + 2x7 + 9]
= 1x[3 + 14 + 6 + 12 + 10 + 14 + 9]
= 68 sq units

OR reading off the required values from **List 2 and List 3**:

Area = ½ x 2 x [3 + 14 + 6 + 12 + 10 + 14 + 9]
= 68 sq units