Step		
#		
1.	Fill cells 'C2' to 'C7' in column 'C' with angle values in degree.	Matrixer Image: Displayed formulas Data Review View Automate Help File Home Insert Page: Layout Formulas Data Review View Automate Help Image: Displayed formulas Data Review View Member Total Image: Displayed formulas Formulas Signas Signas Signas
		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
2.	Go to (or click) cell 'E2' and start	AutoSave @ Off
	writing formula. Note that the first character is '=' (equal sign). Also, note	File Home insert Page Layout Formulas Data Review View Automate Heip Image: Strain S
	that inside 'COS' function we perform	SUM \checkmark I \checkmark f \checkmark f \checkmark =2+3+COS (4+PI()/180+C2) A B C D E F G H
	conversion from degrees to radians, as 'COS' accepts radians as arguments.	1 2 10 -2+3*COS(4*PI()/180*C2) 3 3 3 5 70 6 90
3.	Press 'Enter', and the first cell – 'E2' –	7 110 8 9 9 10 10 ✓ 4 Autosee ● OTF ♡ ~ * Boott - Ercel
	will be filed with calculated value.	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $
		A B C D E F G H
		2 10 4.29813 3 30
4.	Select calculated cell, release mouse	10
- 1 .	button and move mouse pointer to the bottom left corner of the cell. (Note that the cursor shape has changed to cross '+'.) Press and hold left mouse button.	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $

Example 1: Given angles in degree in a row 'C', let's calculate the values of the function $f(x) = 2 + 3\cos 4x$ in row 'E', where 'x' represents the angles in row'C' :

5.	While holding left mouse button, move mouse downward, to the cell 'E7'.	AutoSare Or O C ² ▼ Booki - Excel O Search File Home Insert Page Layout Formulas Data Review Automate Help Image: A processing of the page Layout Formulas Data Review View Automate Help Image: A processing of the page Layout Formulas Data Review View Automate Help Image: A page Layout Formulas A Ar A A A A B Image: A Image:								
		$ \begin{array}{ c c c c c c } \hline 1 & \swarrow & \checkmark & \checkmark & f_x \\ \hline 1 & & & & & \\ \hline 1 & & & \\ 1 $								
		1	A	В	С	D	E	F	G	Н
		2			10		4.29813			
		3			30					
		4			50					
		5			70					
		6			90					
		7			110					
		8								
		10								
6.	Release mouse button. Every cell in column 'E' will be updated with the expression entered in step 2 but calculated with appropriate argument	Image: Autostere @ origin [] 9 ∨ (? - ∞ Booth - Excet P Search File Home Insert Page layout formulas Data Review View Automate Help Image: Autostere Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image: Autostere Image:								ble ~
		4	A	В	С	D	E	F	G	Н
	from column 'C'. For example, cell 'E6' will use value from cell 'C6'.	1			10		1 00010			
		2			10 30		4.29813			
		4			50		-0.81908			
		5			70		2.52094			
		6			90		5			
		7			110		2.52094			
		8						.		
		9								
		10								

Example 2: Let's find the best linear function (the best fit) y(x) = ax + b, i.e. slope a and intercept b, which will best fit (measured or calculated) set of points (X_i, Y_i) .

Step #		
1.	Populate rows with points (X_i, Y_i) . We put points in adjacent rows 'B' and 'C', and from rows '2' to '6'. In cells 'B1'	$ \begin{array}{ c c c c c c } \hline & AutoSave \hline \hline or & \hline & $
	and 'C1' we put description od the columns, for our convenience; it is not	A B C D E F G H
	required.	2 1 2.1 3 2 4 4 3 5.8 5 4 8 6 5 9.9 9 9 9 10 9
2.	To find slope a and intercept b , we	a AutoSive ● orr 등 5 ~ C ¹ + = Book1 - Excel
	enter formula in arbitrary cell, here it is 'E5'. The formula is:	File Home Insert Page Layout Formulas Data Review Verv Automate Help fix ∑ Automate Logical E Logical E E The Residuets Financial inset Becently Used ~ © Test ~ © Meth Sting ~ Memory E Financial ~ E The Compandism Function Financial ~ © Date Stime ~ Memory E Financial ~ E Financial ~ E UNREST ~ INSet Stime ~ Memory E Financial ~
	=LINEST(y-range, x-range, TRUE, TRUE)	A B C D E F G H 1 X_i Y_i
	The last two 'TRUE' tells formula to	4 3 5.8 5 4 8 =LINEST(C2:C6,B2:B6,TRUE,TRUE) 6 5 9.9
	calculate intercept b and to calculate errors of both slope a and intercept b .	7 8 9 10
3.	Press 'Enter' (evaluate formula), and	a AutoSwe @orr ☐ 9 - 0 - = Bookt - Excel
	result will be stored in two columns.	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
		A B C D E F G H 1 X,i Y,i 1 2 1 2.1 3 2 4 </th
		4 3 5.8 5 4 8 1.96 0.08 6 5 9.9 0.03464 0.11489 7 0.99906 0.10954 8 3201.33 3 9 38.416 0.036
4.	Values of slope a and intercept b are in	10 ⓐ AutoSave ⓐ Cit) 등 ▷ - २ · २ Book1 - Excel ▷ Search
	first row, and corresponding (standard) errors are in second row. In our	File Home Insert Page Layout Formulas Data Review View Automate Help fxx Z. AutoSum Image Lookup & Reference* Image Image <td< th=""></td<>
	example:	E5 \checkmark i $\times \checkmark f_x \lor$ =LINEST(C2:C6,B2:B6,TRUE,TRUE)
	$a = (1.960 \pm 0.035)$ and	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	$b = (0.08 \pm 0.11)$	4 3 5.8 01 b 5 4 8 1.96 0.08 6 5 9.9 0.03464 0.11489 7 Error 3209306 0.10954 8 Error 3201.33 3
		$_{10}^{9}$ of <i>a</i> $_{38.416 \ 0.036}^{9}$