

How do I plot an equation in Google Sheets?

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"Google Sheets is a powerful tool that allows users to create and manipulate data in a spreadsheet format. To plot an equation in Google Sheets, users can utilize the built-in chart feature. This feature allows for the creation of a visual representation of data through various chart types, including line graphs and scatter plots. Users can input their equation into the spreadsheet, then select the cells and use the chart feature to generate a graphical representation of the data. This enables users to easily observe and analyze the relationship between variables in the equation."

Plot an Equation in Google Sheets

Often you may want to plot an equation or a function in Google Sheets.

Fortunately this is easy to do with built-in formulas.

This tutorial provides several examples of how to plot equations/functions in Google Sheets.

Example 1: Plot a Linear Equation

Suppose you'd like to plot the following equation:

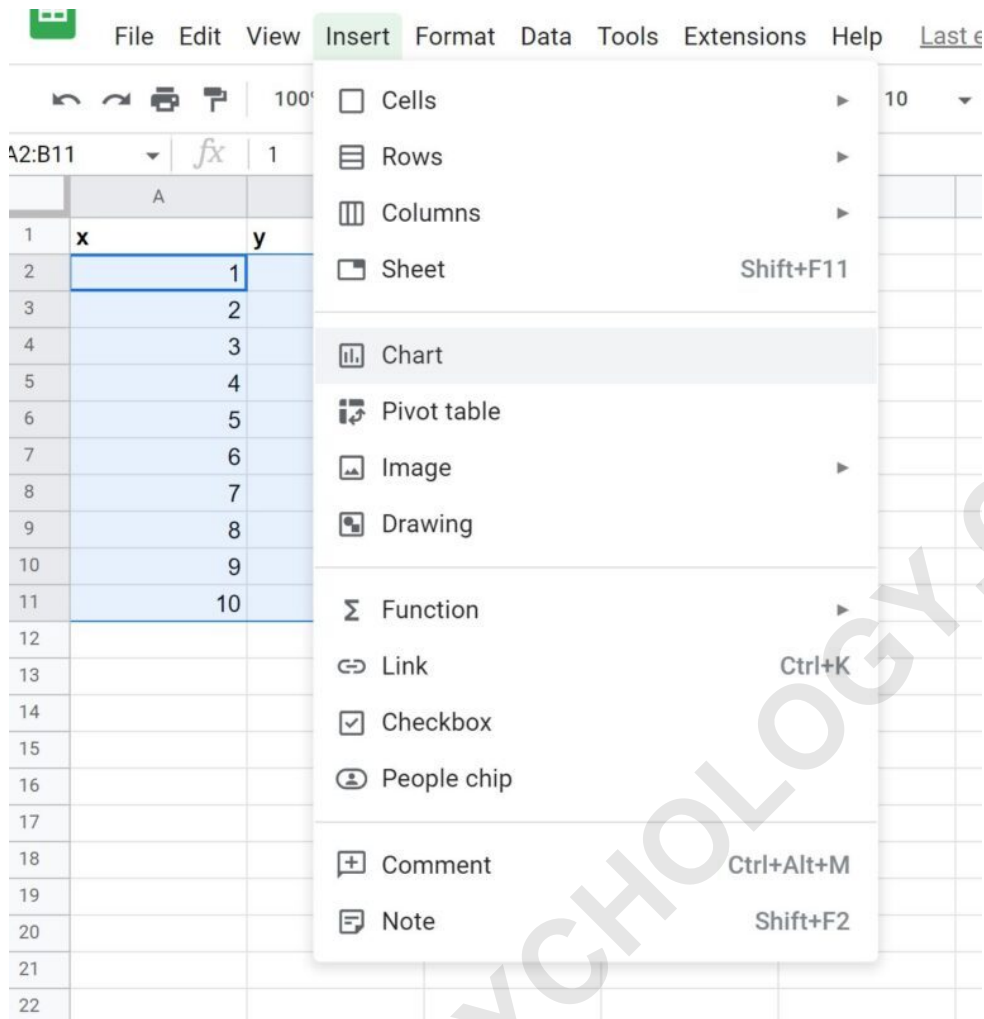
$$y = 2x + 5$$

The following image shows how to create the y-values for this linear equation in Google Sheets, using the range of 1 to 10 for the x-values:

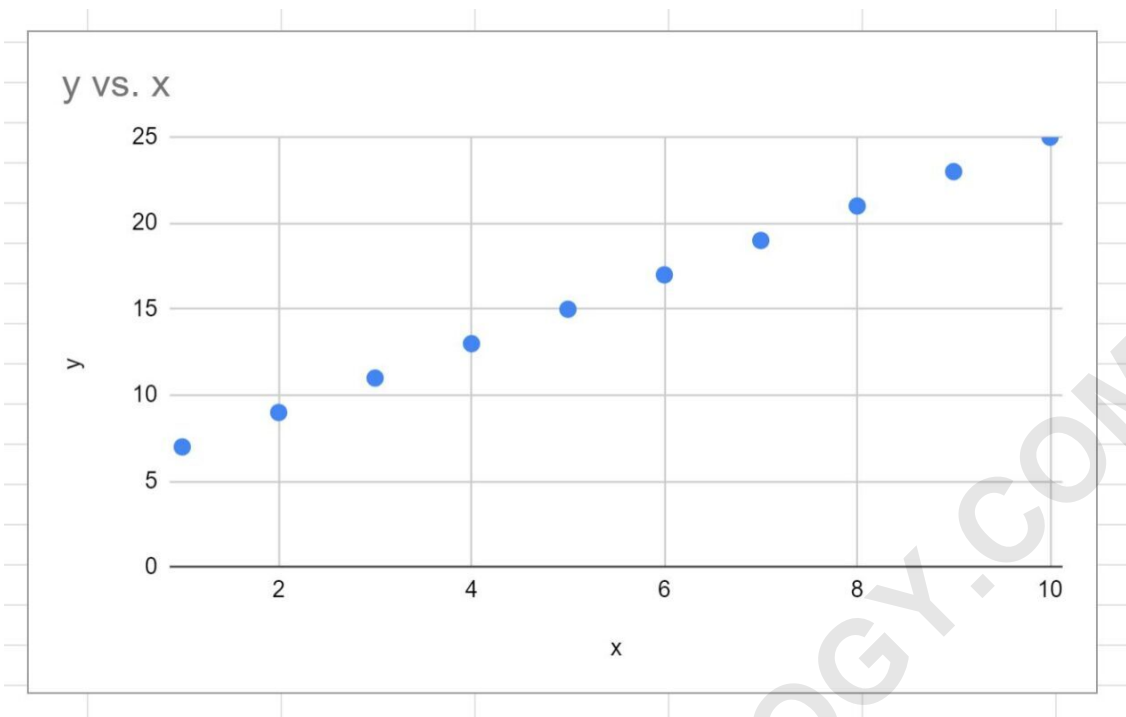
B2 fx $=2*A2+5$

	A	B	C	D
1	x	y		
2		1	7	
3		2	9	
4		3	11	
5		4	13	
6		5	15	
7		6	17	
8		7	19	
9		8	21	
10		9	23	
11		10	25	
12				
13				
14				
15				
16				
17				

Next, highlight the values in the range A2:B11. Then click on the Insert tab. Then click Chart:



The following plot will automatically appear:



We can see that the plot follows a straight line since the equation that we used was linear.

Example 2: Plot a Quadratic Equation

Suppose you'd like to plot the following equation:

$$y = 3x^2$$

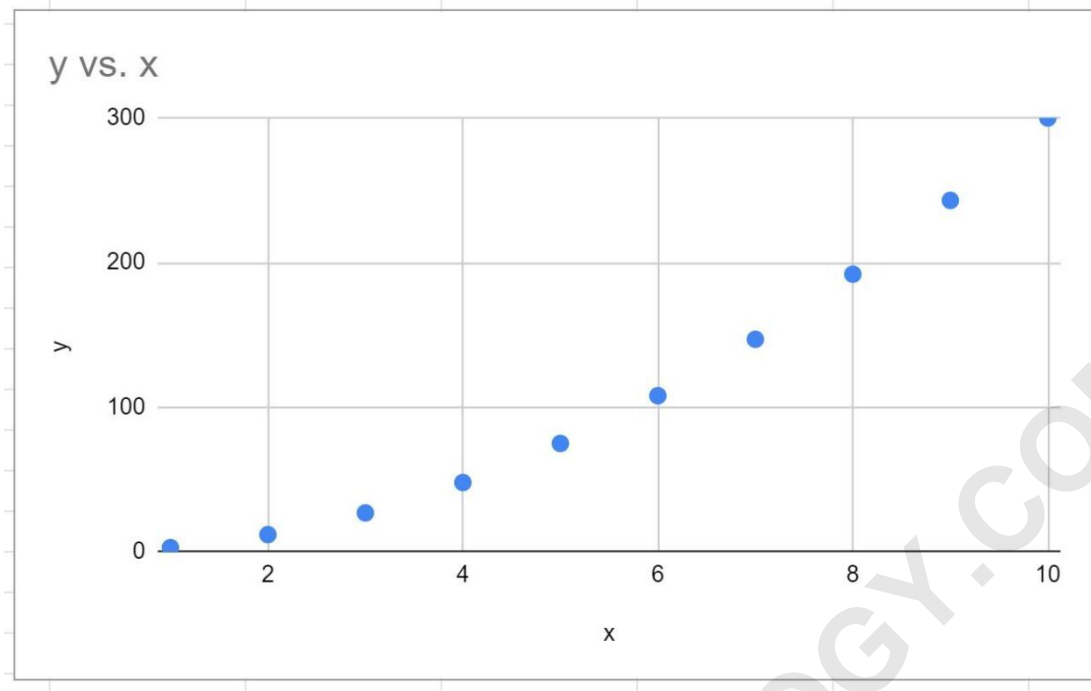
The following image shows how to create the y-values for this equation in Google Sheets, using the range of 1 to 10 for the x-values:

B2 fx $=3*A2^2$

	A	B	C	D
1	x	y		
2		1	3	
3		2	12	
4		3	27	
5		4	48	
6		5	75	
7		6	108	
8		7	147	
9		8	192	
10		9	243	
11		10	300	
12				
13				
14				
15				
16				
17				

Next, highlight the values in the range A2:B11. Then click on the Insert tab. Then click Chart.

The following plot will automatically appear:



We can see that the plot follows a curved line since the equation that we used was quadratic.

Example 3: Plot a Reciprocal Equation

Suppose you'd like to plot the following equation:

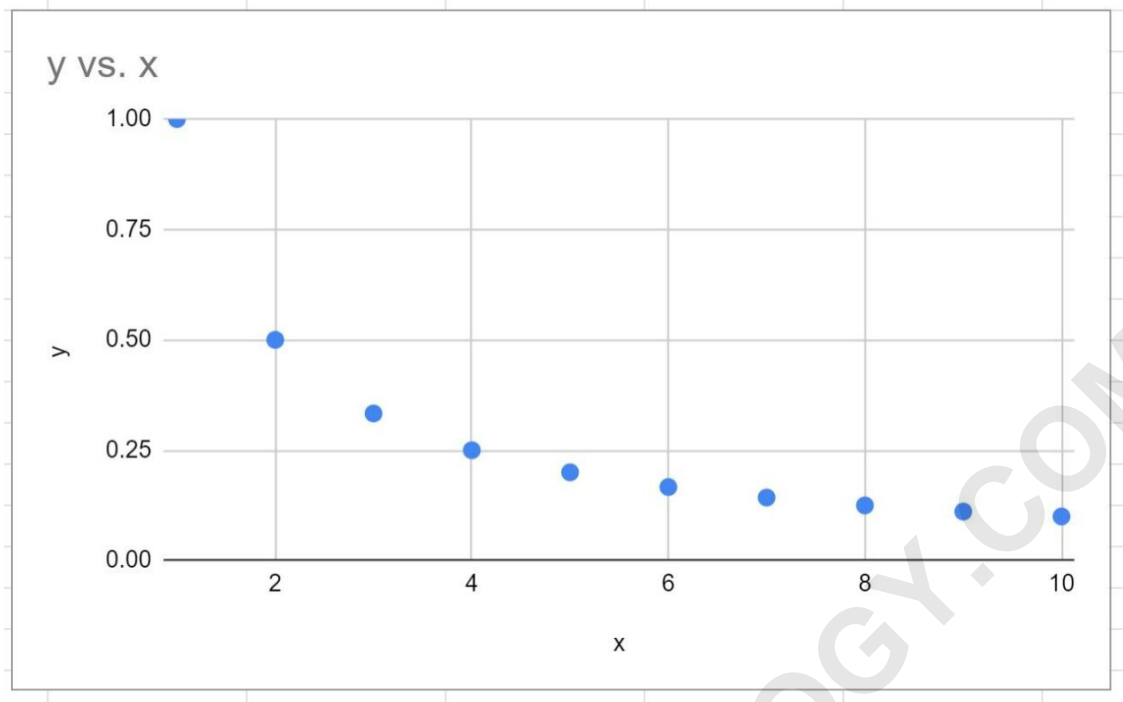
$$y = 1/x$$

The following image shows how to create the y-values for this equation in Google Sheets, using the range of 1 to 10 for the x-values:

	A	B	C	D
1	x	y		
2		1		
3		2		
4		3		
5		4		
6		5		
7		6		
8		7		
9		8		
10		9		
11		10		
12				
13				
14				
15				
16				
17				

Next, highlight the values in the range A2:B11. Then click on the Insert tab. Then click Chart.

The following plot will automatically appear:



We can see that the plot follows a curved line downwards since this represents the equation $y = 1/x$.

Example 4: Plot a Sine Equation

Suppose you'd like to plot the following equation:

$$y = \sin(x)$$

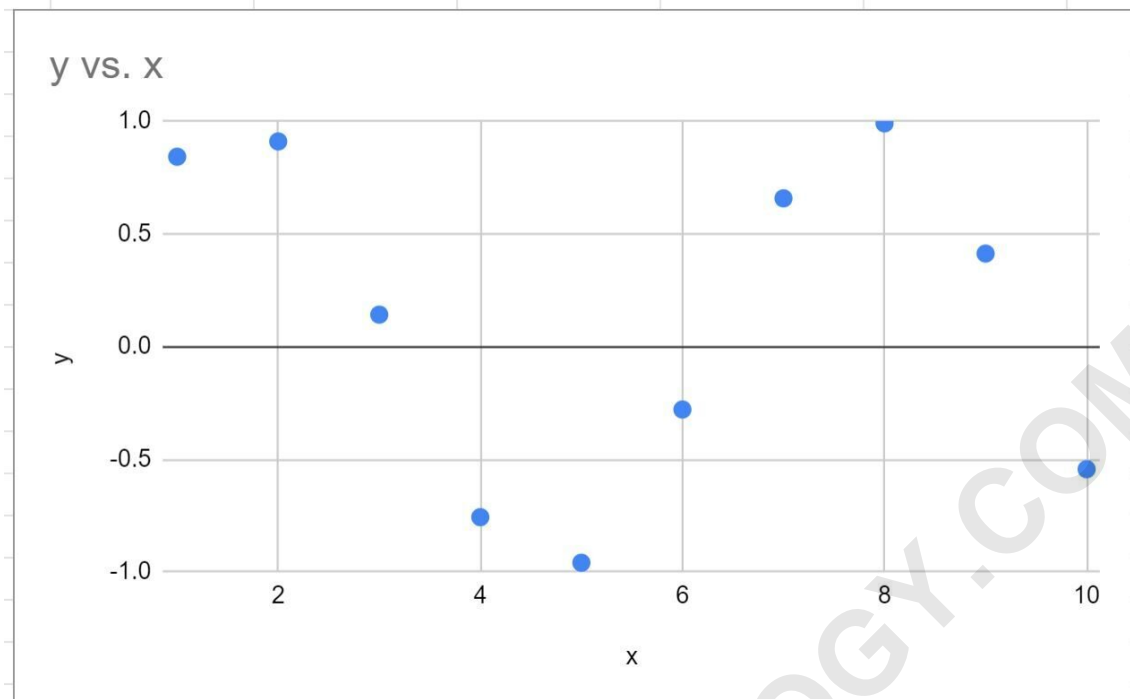
The following image shows how to create the y-values for this equation in Google Sheets, using the range of 1 to 10 for the x-values:

B2 ∇ *fx* =SIN(A2)

	A	B	C	D
1	x	y		
2		1	0.8414709848	
3		2	0.9092974268	
4		3	0.1411200081	
5		4	-0.7568024953	
6		5	-0.9589242747	
7		6	-0.2794154982	
8		7	0.6569865987	
9		8	0.9893582466	
10		9	0.4121184852	
11		10	-0.5440211109	
12				
13				
14				
15				
16				
17				

Next, highlight the values in the range A2:B11. Then click on the Insert tab. Then click Chart.

The following plot will automatically appear:



You can use a similar technique to plot any function or equation in Google Sheets.

Simply choose a range of x-values to use in one column, then use an equation in a separate column to define the y-values based on the x-values.