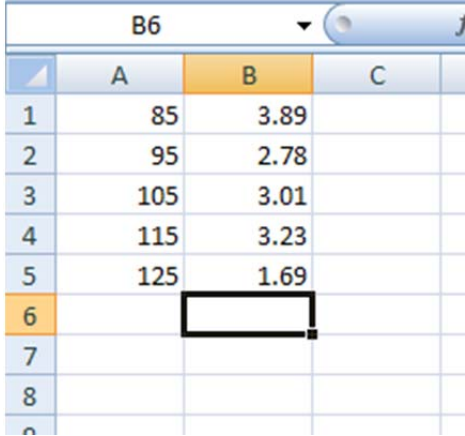


Linear Regression in Excel

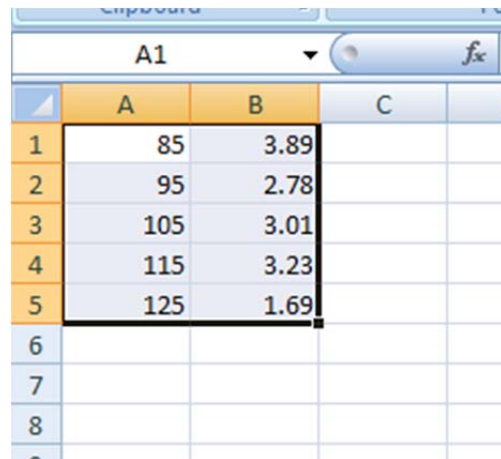
Excel can be used to find a linear model for the data in the table below. Follow the steps below to enter the data into Excel, create a scatter plot, and to carry out linear regression.

Weekly Demand for Milk (thousands of gallons)	85	95	105	115	125
Average Price Per Gallon (dollars)	3.89	2.78	3.01	3.23	1.69

<ol style="list-style-type: none">1. Open Excel.2. Put the quantities from Error! Reference source not found. in column A.3. Put the prices from Error! Reference source not found. in column B.	 <p>The screenshot shows an Excel spreadsheet with the following data:</p> <table border="1"><thead><tr><th></th><th>A</th><th>B</th><th>C</th></tr></thead><tbody><tr><td>1</td><td>85</td><td>3.89</td><td></td></tr><tr><td>2</td><td>95</td><td>2.78</td><td></td></tr><tr><td>3</td><td>105</td><td>3.01</td><td></td></tr><tr><td>4</td><td>115</td><td>3.23</td><td></td></tr><tr><td>5</td><td>125</td><td>1.69</td><td></td></tr><tr><td>6</td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td></tr></tbody></table>		A	B	C	1	85	3.89		2	95	2.78		3	105	3.01		4	115	3.23		5	125	1.69		6				7				8			
	A	B	C																																		
1	85	3.89																																			
2	95	2.78																																			
3	105	3.01																																			
4	115	3.23																																			
5	125	1.69																																			
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7																																					
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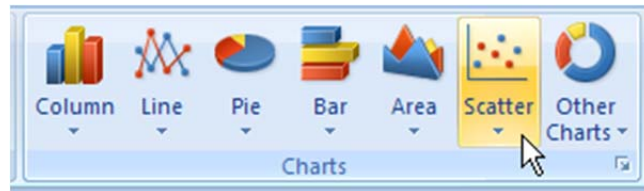
Linear Regression in Excel

4. To make a scatter plot of the data, we need to select the data. Click in cell A1. Hold the left mouse button and drag the cursor to cell A5. A box will be drawn around the data indicating that you have selected the data.

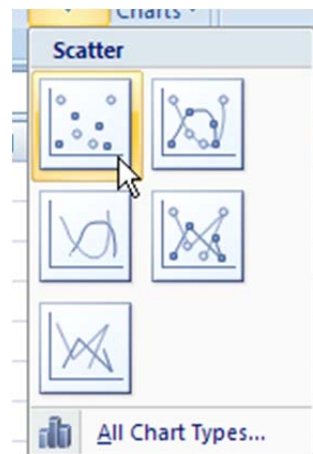


	A	B	C
1	85	3.89	
2	95	2.78	
3	105	3.01	
4	115	3.23	
5	125	1.69	
6			
7			
8			

5. Click on the Insert tab along the top of the Excel window. On the Charts panel, select Scatter.

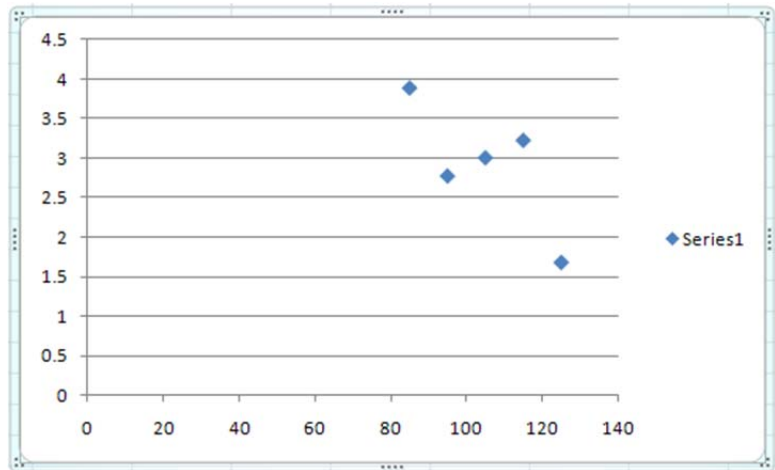


6. In the drop box that appears, choose Scatter with only Markers.

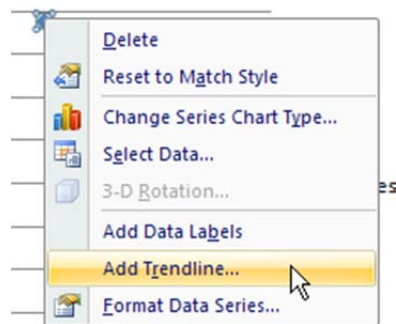


Linear Regression in Excel

7. A scatter plot will appear with vertical gridlines and a legend on the right.

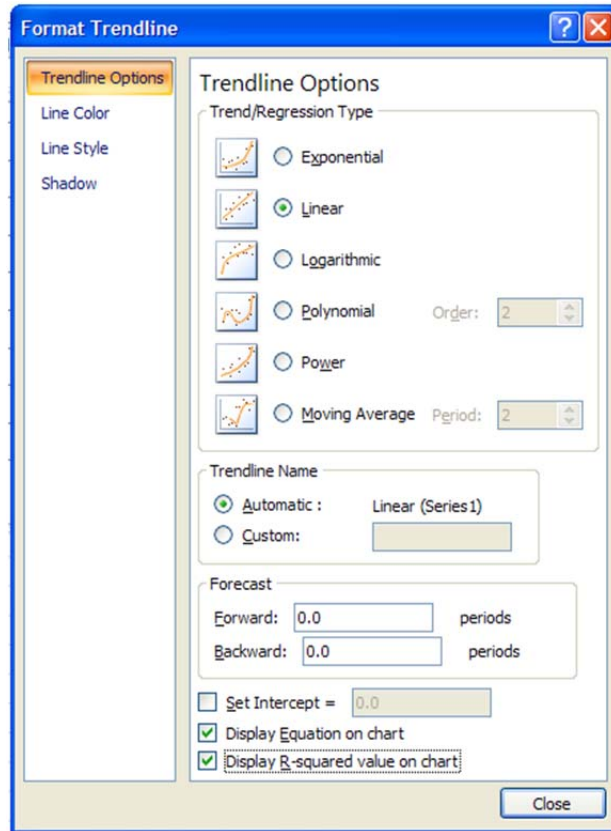


8. To carry out linear regression, right click on one of the data points. From the menu that appears, select Add Trendline.

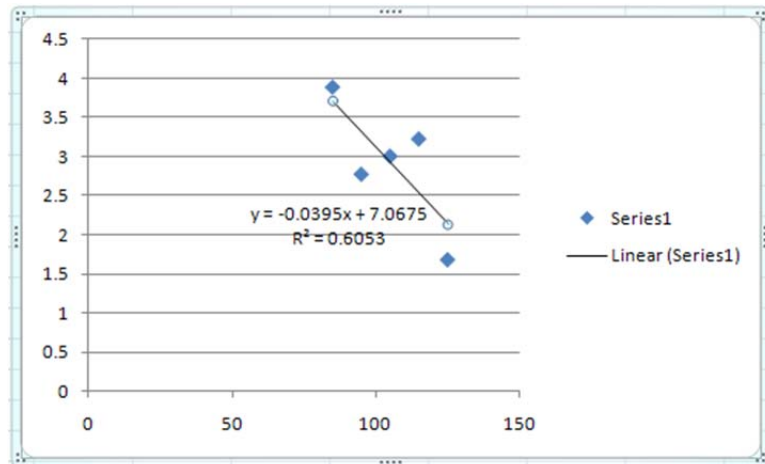


Linear Regression in Excel

9. The Format Trendline box allows you to select the type of regression and how it appears on the scatter plot. Make sure that Linear is selected to insure that linear regression is performed. Check Display Equation on chart and Display R-squared value on chart. This will place the linear function's equation on the graph on the scatter plot.




10. Click Close. The linear function will appear on the scatter plot between the lowest and highest quantity. To extend the function beyond these points,



Linear Regression in Excel

<p>change the values under Forecast in step 9. Increasing the Forward value extends the line to the right.</p> <p>Increasing the Backwards value extends the line to the left.</p>	
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The function Excel finds is always written with an independent variable x and a dependent variable y . You'll need to change to more appropriate variables for the problem you are solving. If you want to save the worksheet with the graph, make sure

you click on the  icon in the upper left corner of the Excel window.