

Excel Tutorial: Graphing a Demand Curve

APEC 5560

Prof. Sara A. Sutherland
Utah State University

In this example, we will construct a demand curve using two points.

Information: At a price of \$100 per hotel room, demand is for 2,400. When the price went to \$200, the demand is cut in half to 1,200.

Exercise: Construct the demand curve for hotel rooms.

The screenshot shows the Microsoft Excel interface with the following details:

- Workbook:** Workbook3
- Menu Bar:** Home, Insert, Page Layout, Formulas, Data, Review, View
- Home Tab:** Paste, Cut, Copy, Format, Calibri (Body), 18, Bold, Italic, Underline, Paragraph, Styles, Merge & Center, General, \$, %
- Formula Bar:** Graph demand curve given two points
- Grid:** Columns A-I, Rows 1-23. Cell A2 is highlighted in yellow and contains the text "Graph demand curve given two points".
- Data Table:**

	Quantity	Price
4	1200	200
5	2400	100

The screenshot shows the Microsoft Excel interface with the 'Insert' tab selected in the ribbon. The ribbon includes options for PivotTable, Recommended PivotTables, Table, Pictures, Shapes, SmartArt, Screenshot, Store, My Add-ins, Bing Maps, People Graph, and Recommended Charts. The active cell is A5, containing the value 1200. The spreadsheet contains the following data:

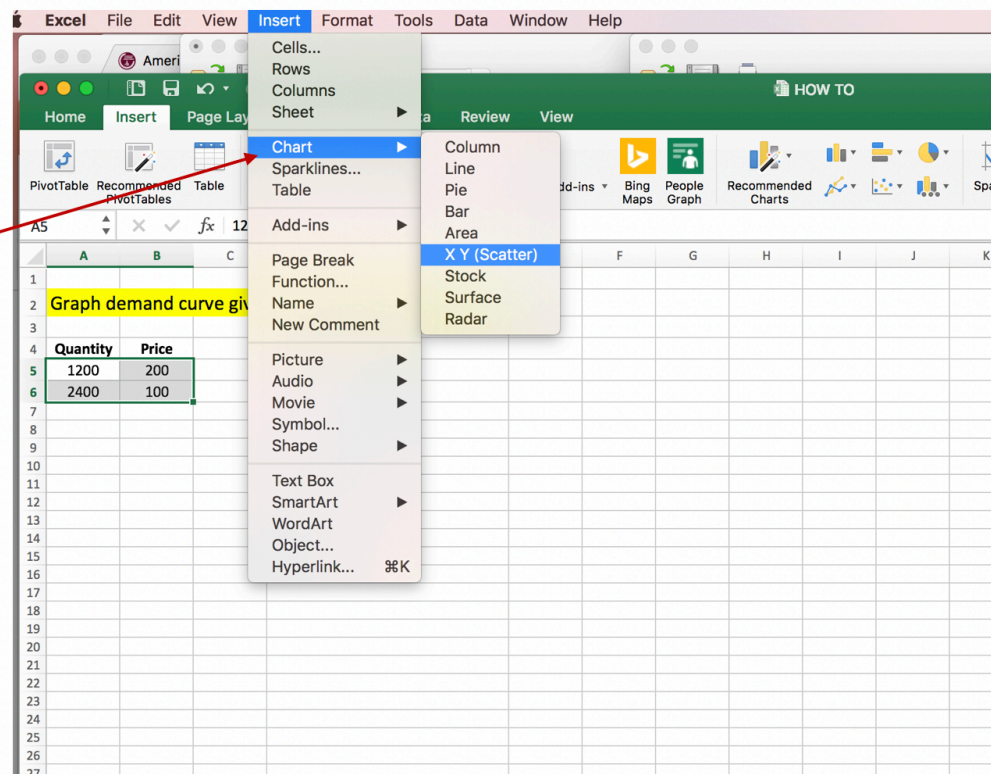
Quantity	Price
1200	200
2400	100

The text 'Graph demand curve given two points' is highlighted in yellow in cell B2. The data in cells A5 and B5 is highlighted with a green border.

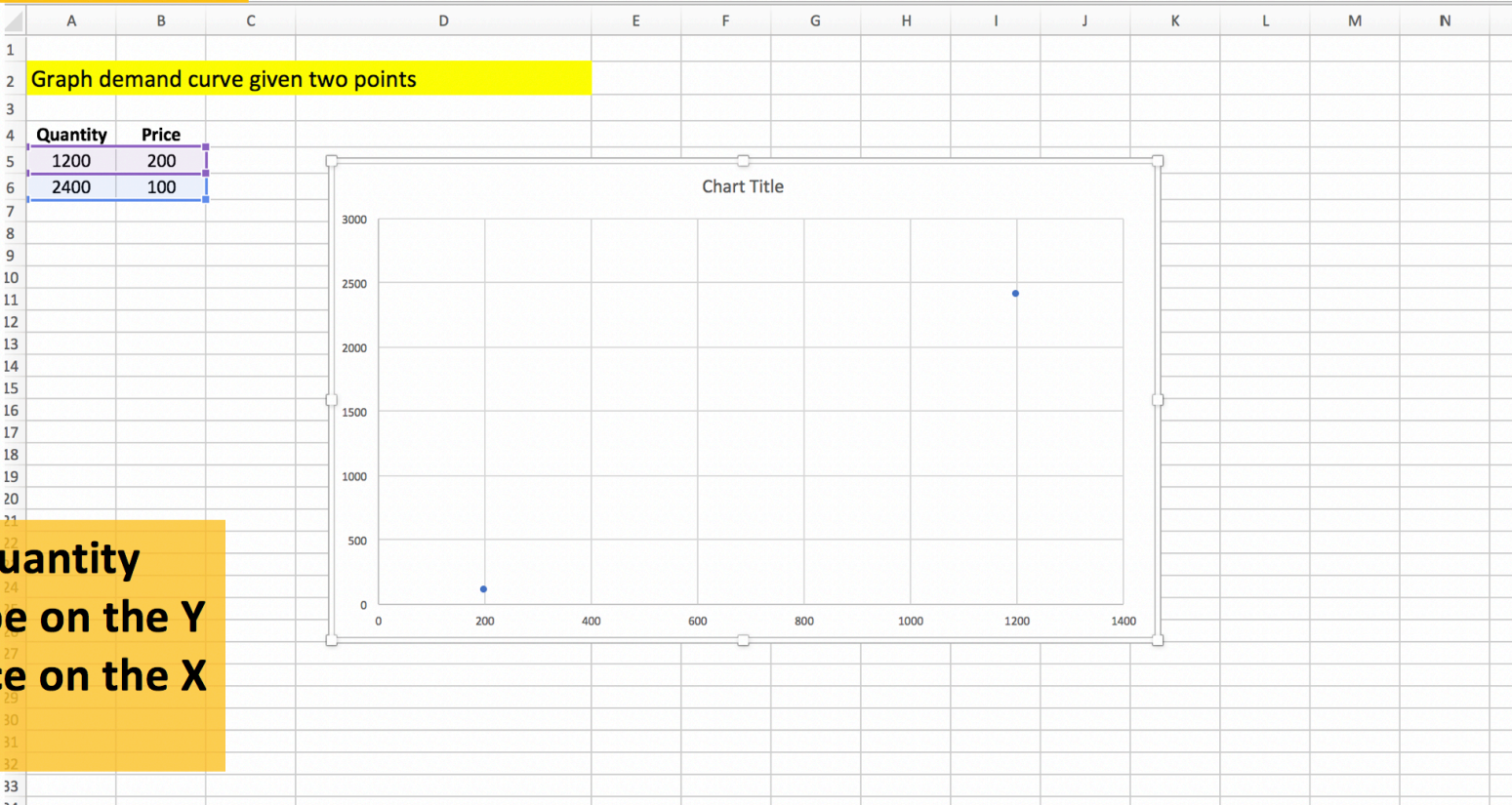
1) Click the insert tab

2) Highlight data to be graphed

3) Click the insert tab and select Chart, then X Y (Scatter)



Your chart should look something like this...



Format Chart Area

Chart Options

Fill

Border

- No line
- Solid line
- Gradient line
- Automatic

Color

Transparency

Width

Compound type

Dash type

Cap type

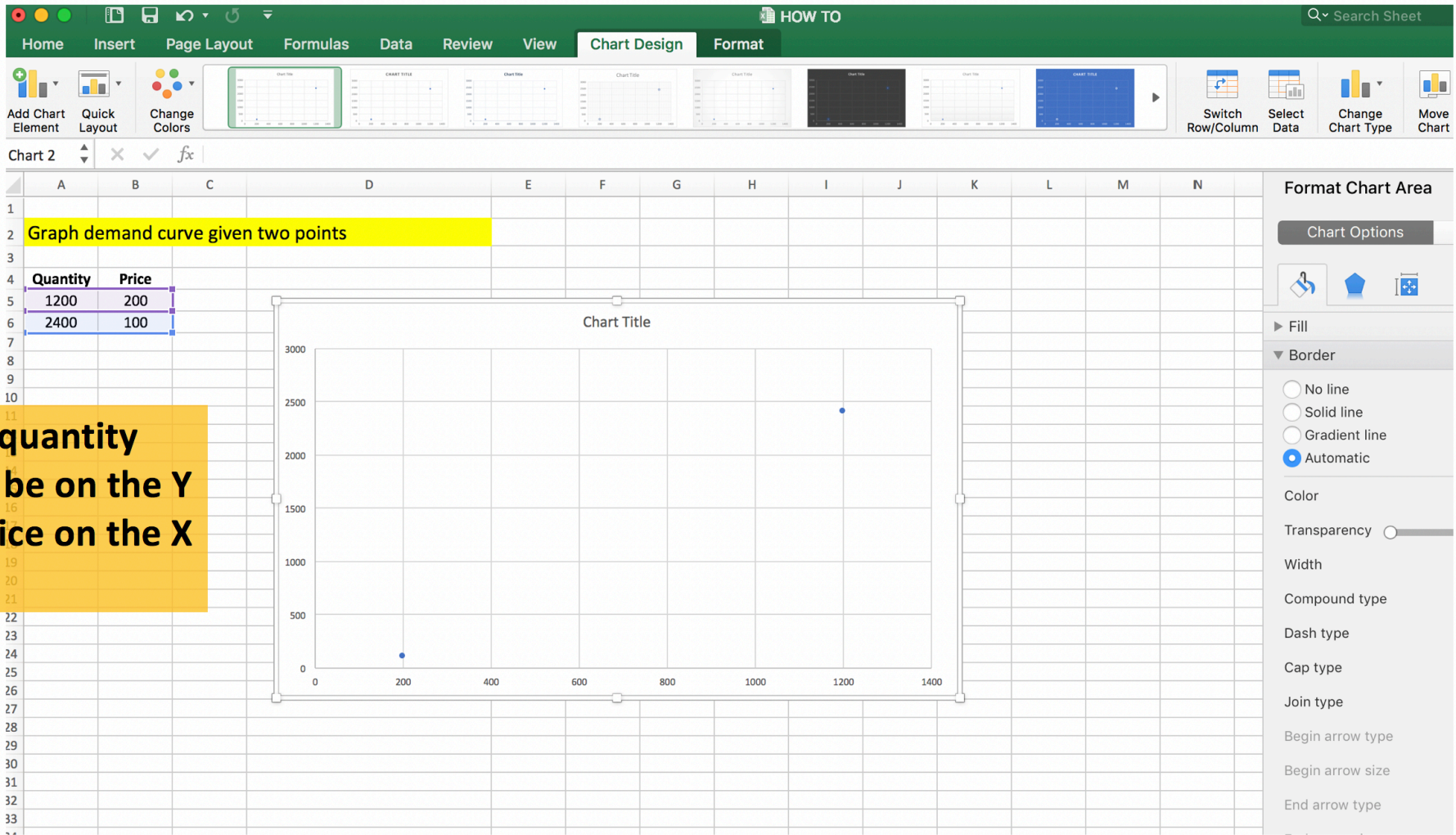
Join type

Begin arrow type

Begin arrow size

End arrow type

But notice quantity appears to be on the Y axis and price on the X axis



But notice quantity appears to be on the Y axis and price on the X axis

Switching Axis: Method 1 (Easy)

The screenshot shows the Microsoft Excel interface with the 'Chart Design' ribbon selected. The ribbon contains several options, including 'Switch Row/Column', which is highlighted by a red arrow. The worksheet contains a table with two columns: 'Quantity' and 'Price'. The data points are (1200, 200) and (2400, 100). A chart is displayed below the table, showing two data points on a coordinate plane. The Y-axis represents Price (0 to 250) and the X-axis represents Quantity (0 to 3000). The chart is titled 'Chart Title'.

Graph demand curve given two points

Quantity	Price
1200	200
2400	100

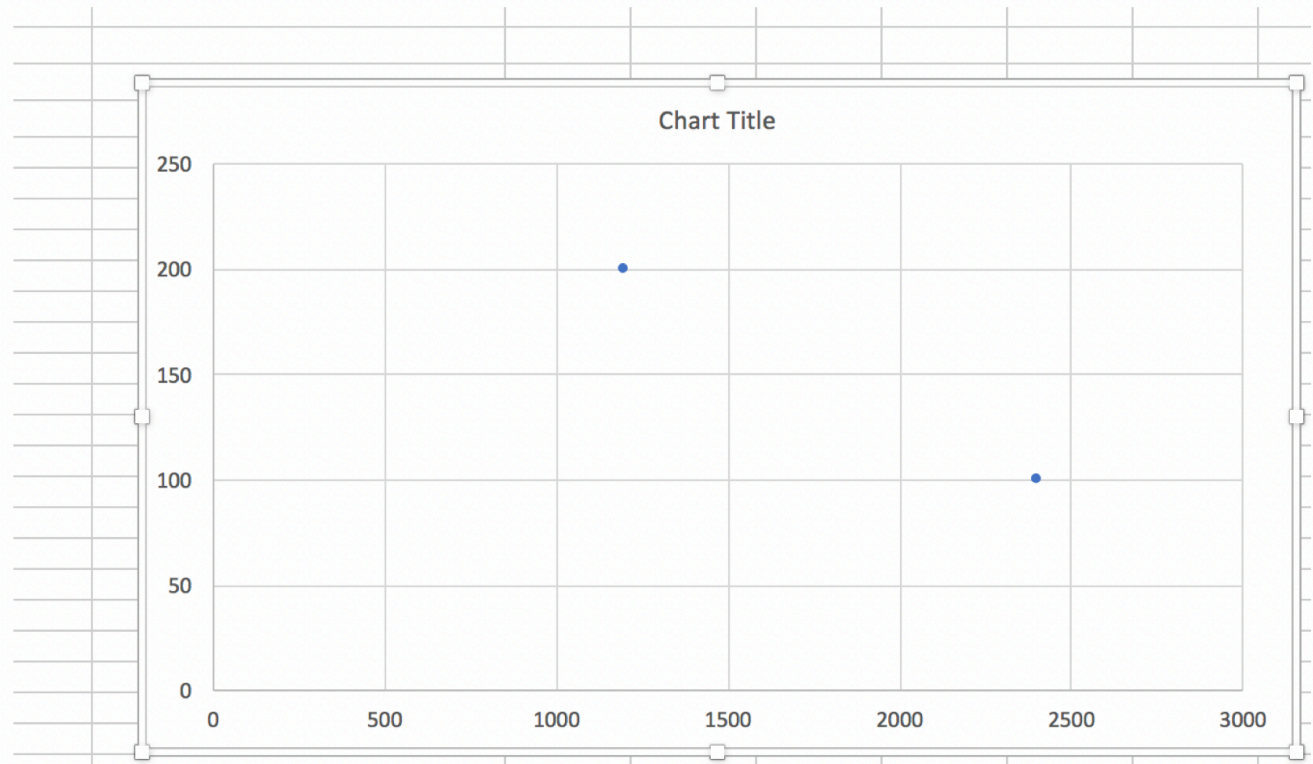
4) Click “Switch Row/Column” to switch axis (now price is on Y axis and quantity is on X axis.)

Switching Axis: Method 1 (Easy)

Voila!

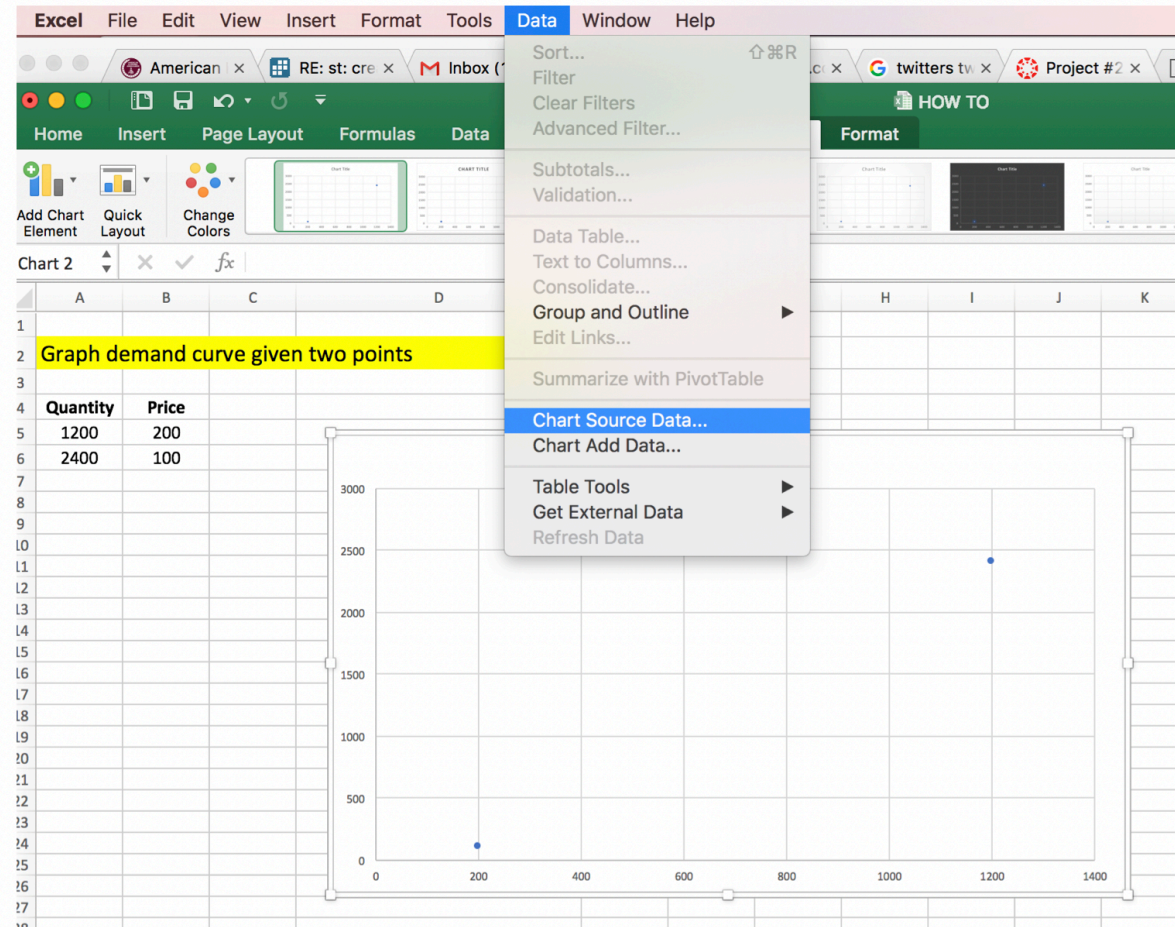
- Price is on Y axis and quantity is on X axis.

Note: We will add axis labels shortly



Switching Axis: Method 2

- 1) Select Data tab
- 2) Select "Choose Source Data"

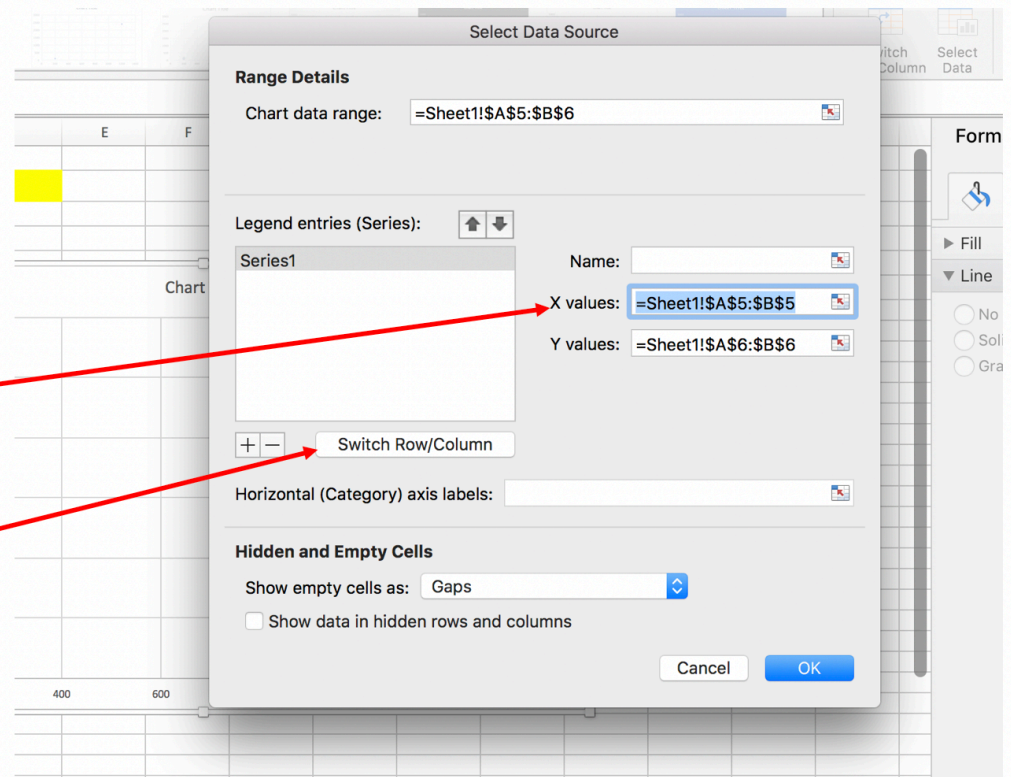


Switching Axis: Method 2

After selecting “Choose Source Data,” this window should appear

1) Highlight X values

2) Click “Switch Row/Column”

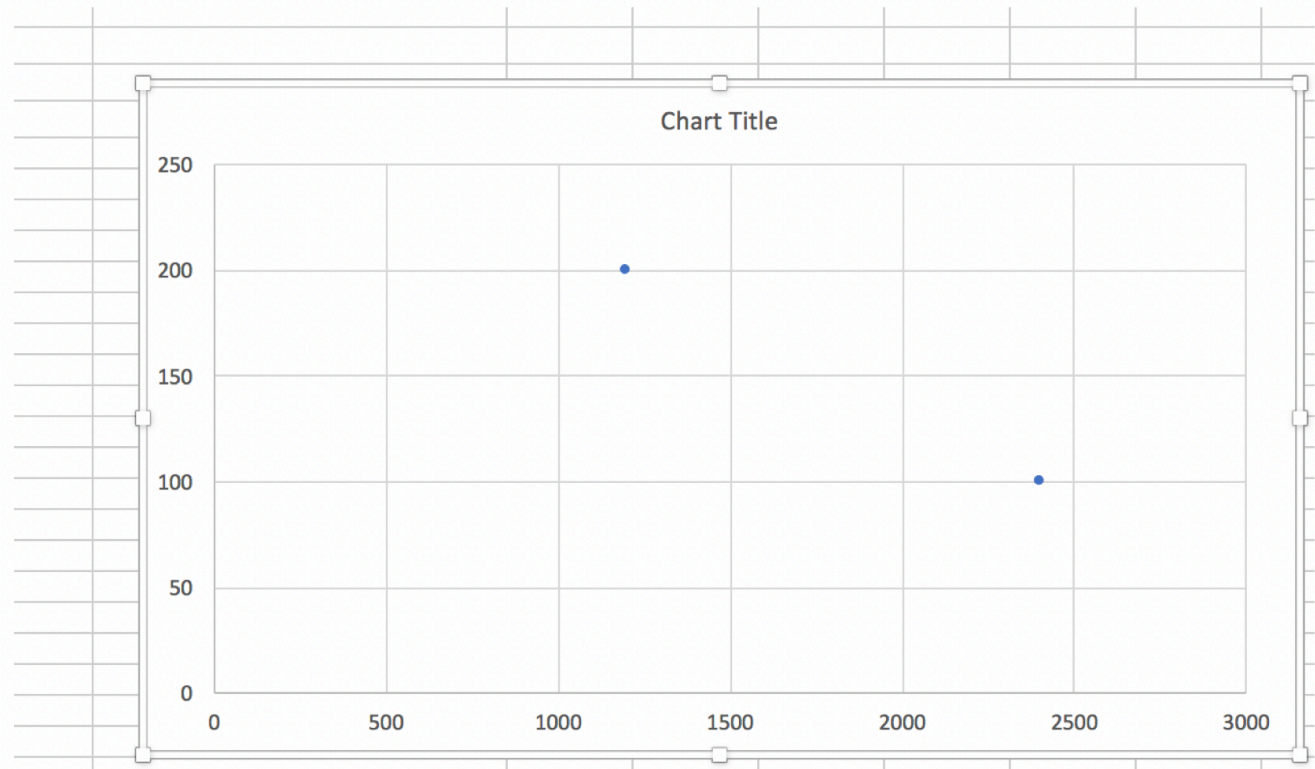


Switching Axis: Method 2

Voila!

- Price is on Y axis and quantity is on X axis.

Note: We will add labels shortly

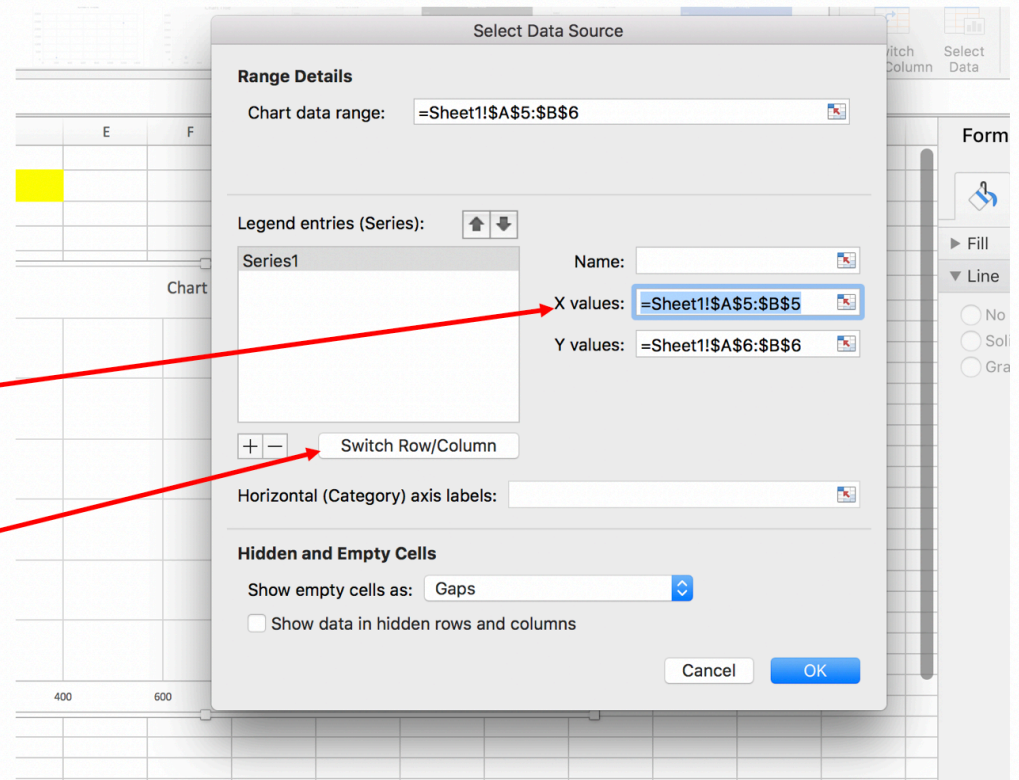


Switching Axis: Method 2

After selecting “Choose Source Data,” this window should appear

1) Highlight X values

2) Click “Switch Row/Column”

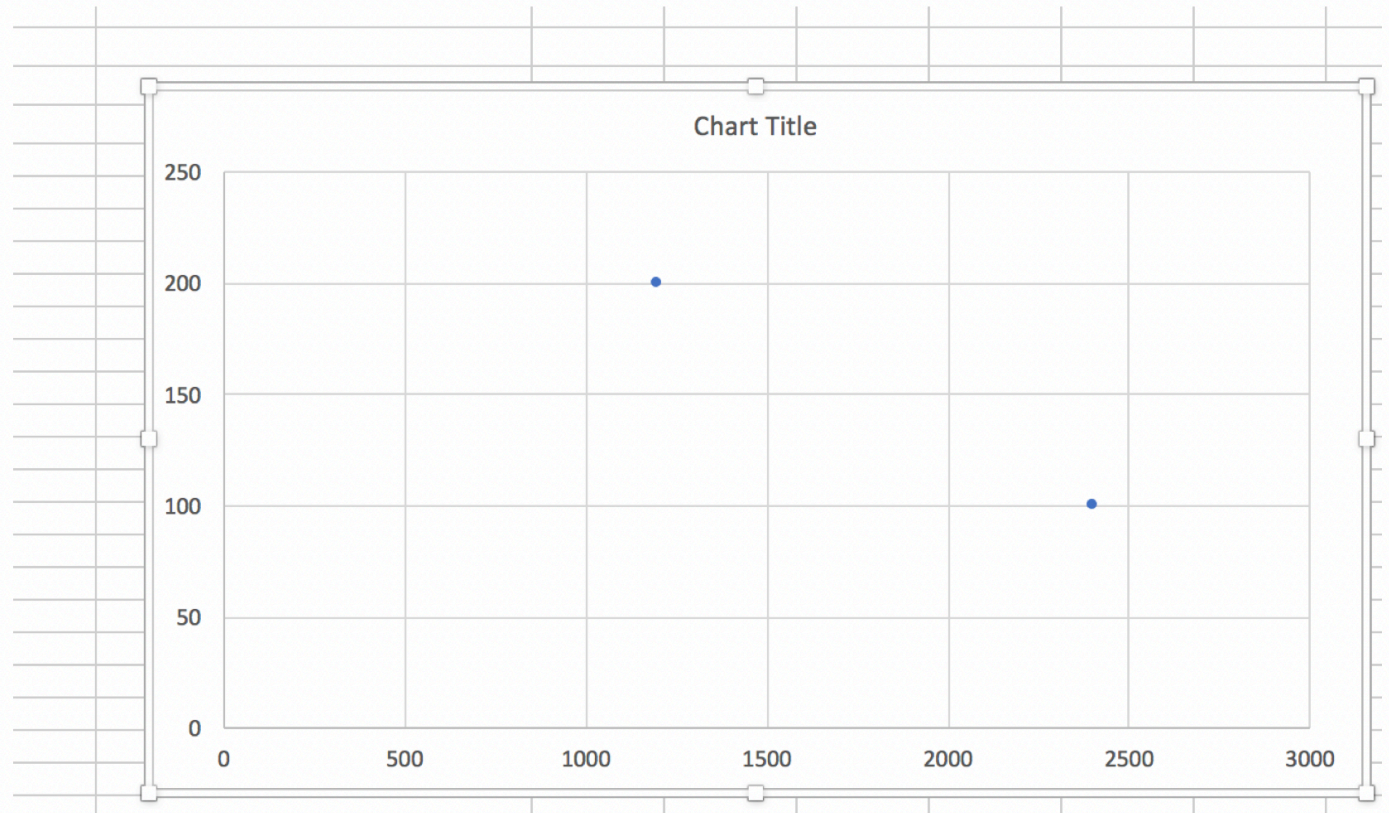


Switching Axis: Method 2

Voila!

- Price is on Y axis and quantity is on X axis.

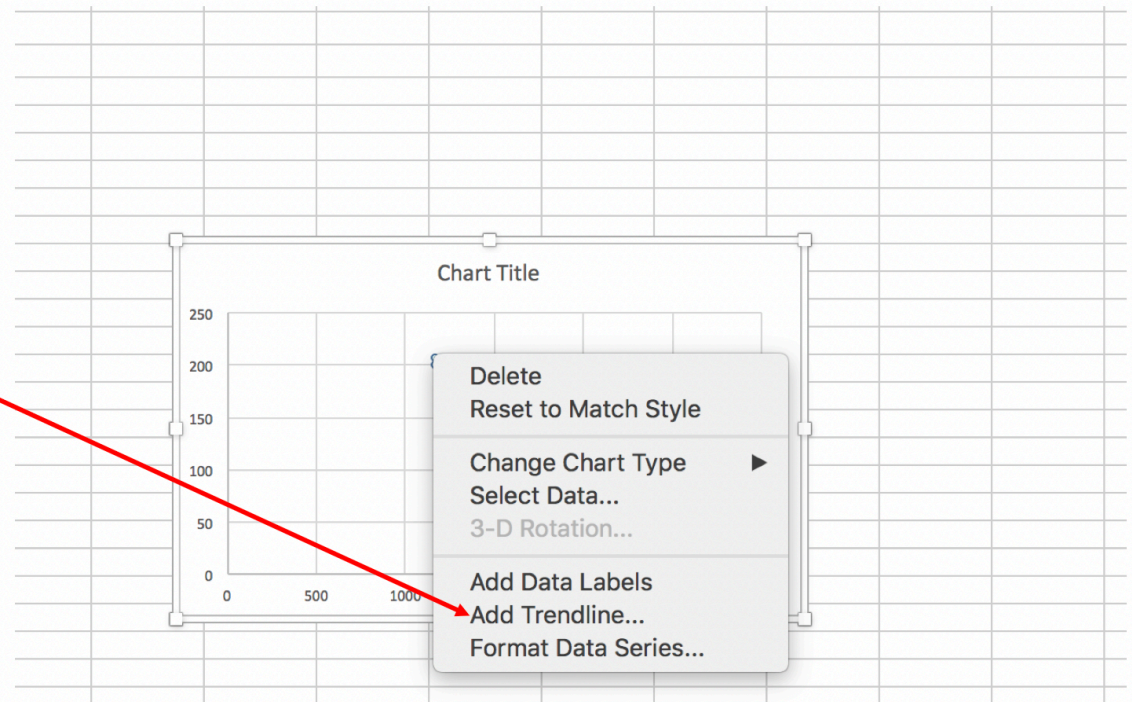
Note: We will add labels shortly



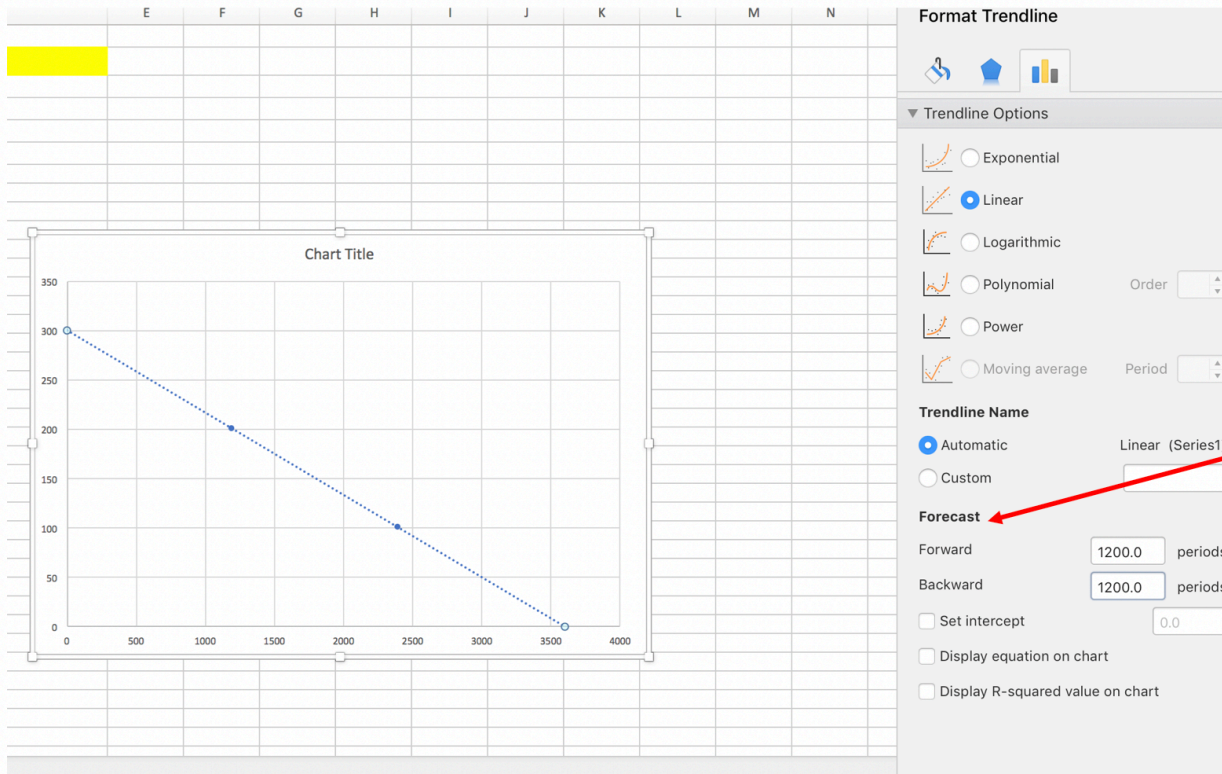
Adding a trend-line

1) Left-click one of the data points on the graph

2) Chose “Add Trendline...”



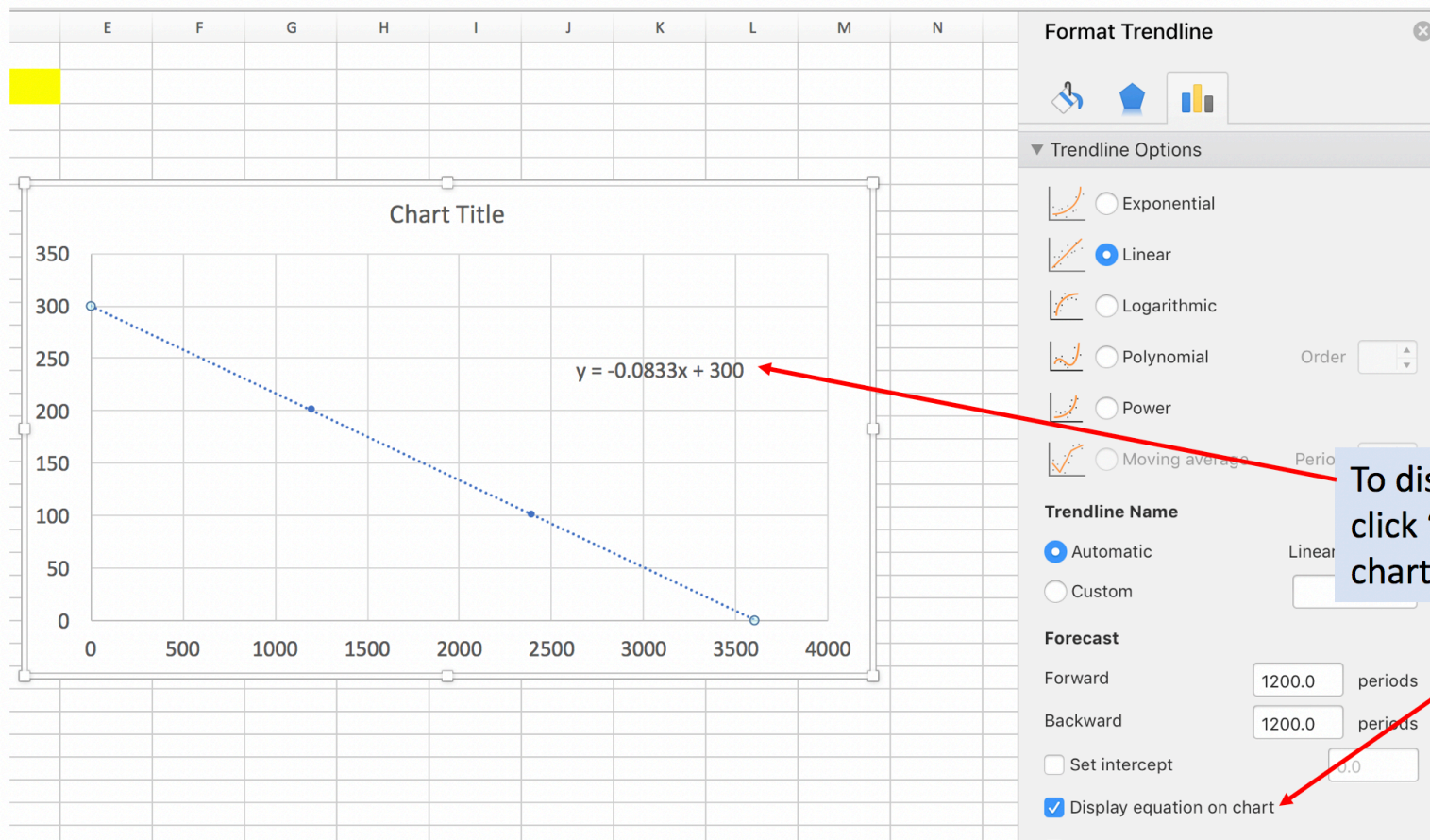
Extending Trend-line



Extend line forward or backward by increasing number of periods (under "Forecast")

In this example, I forecasted forward 1200 and backward 1200

Displaying (Demand) Equation



Format Trendline

Trendline Options

- Exponential
- Linear
- Logarithmic
- Polynomial
- Power
- Moving average

Trendline Name

- Automatic
- Custom

Forecast

Forward: 1200.0 periods

Backward: 1200.0 periods

Set intercept

Display equation on chart

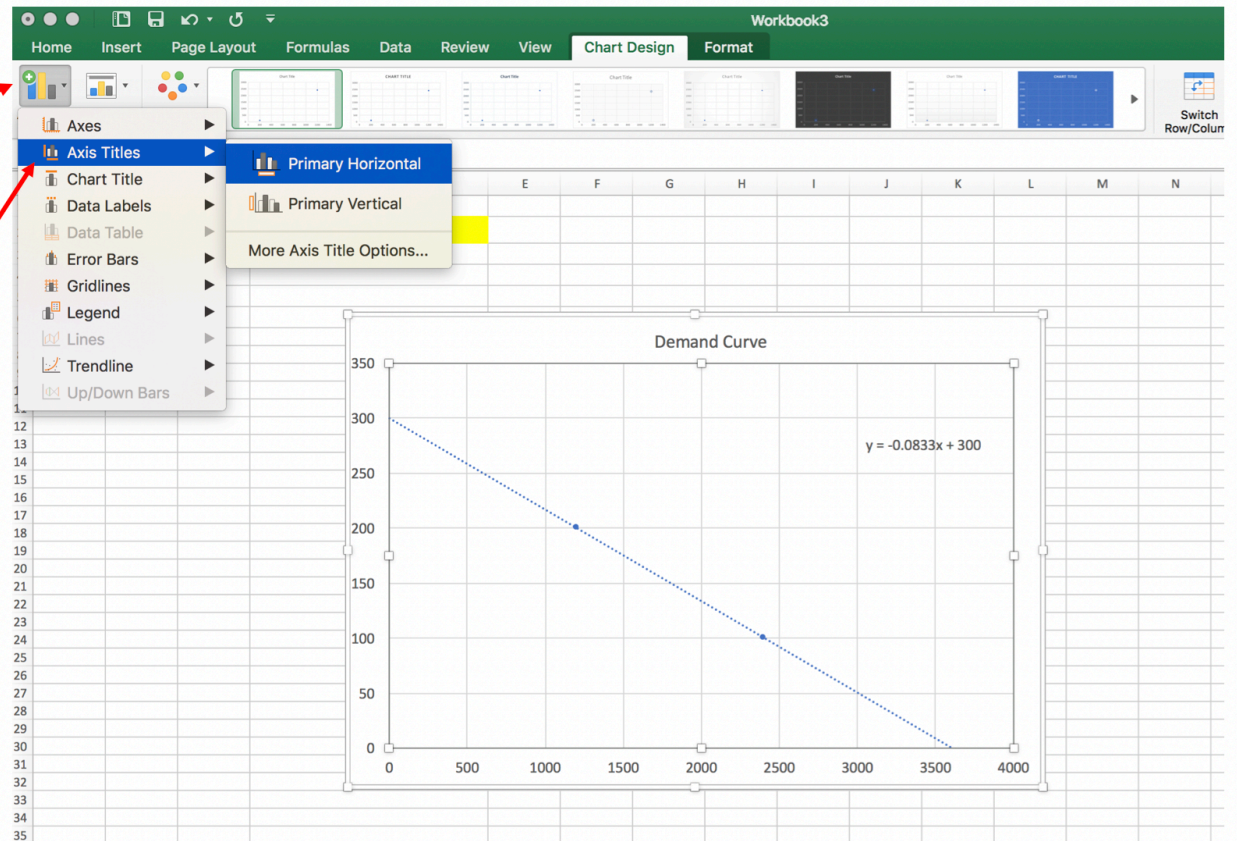
Remember: price is our y value and quantity is our x value

To display equation of line, click "Display equation on chart"

Adding Axis Titles

Under "Chart Design" tab,
click "Add Chart Element"

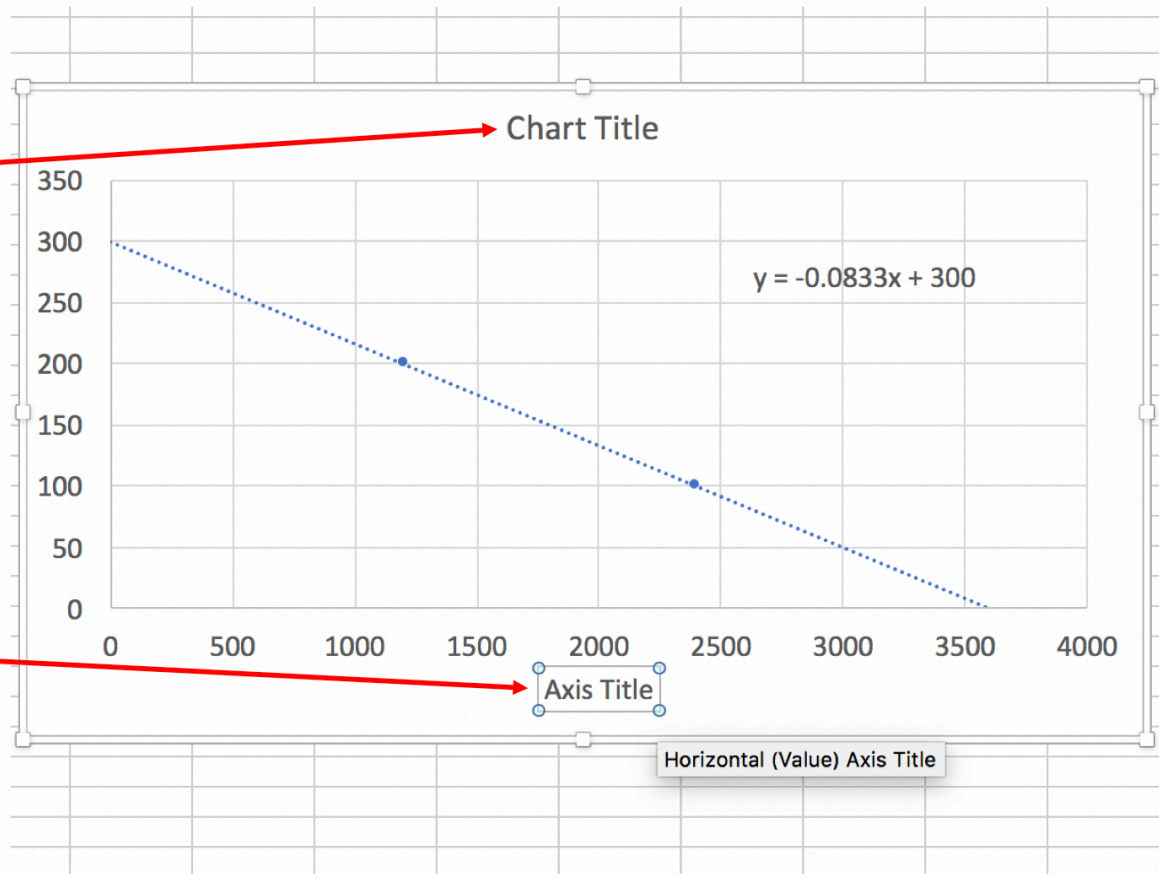
Select "axis titles"
• Then choose "Primary
Horizontal" (or primary
vertical)



Adding Axis Titles

You can edit chart title by clicking "Chart Title"

You can now edit your Horizontal Axis Title
In this example, our horizontal axis is "Quantity"



Mission Accomplished: Graph Demand Curve

Demand Curve

