Charting a New Course With Excel

Lesson 1.3

Monday, July 8th

Line and Bar Grades

You are going to take the role of a teacher upon yourself for this activity as you create a series of bar and line graphs that visualize the grades of your class over the course of a semester.

File

03-Stu_LineAndBar → Unsolved → StudentGrades_Unsolved.xlsx

Instructions

- Create a series of bar graphs that visualize the grades of all students in the class, one graph for every month.
- Create a line graph using all of the data that can be used to compare students' grades across the semester.
    - Use filtering in the line graph to allow you to drill down to a specific student's progress throughout the semester.

Hint

When duplicating bar graphs, it pays to get the formatting and look of the chart where you want it for the first graph (e.g. for January), and to then copy that chart and re-select the data for the subsequent copies (keeping the style and format, but just changing the data).

15 Minutes

Game Sales

Looking into a product's sales within a region and comparing it to that product's sales worldwide is a great way to determine how important a region is to a company. In this activity, you will pair up with one of your classmates in order to create a series of scatter plots which will compare video game sales across regions.

File

05_Par_GameSales → VideoGameSales_Unsolved

Instructions

1. Create a scatter plot that compares the NA (North American) sales of games versus the global sales of games. Make sure to add in axis titles, a chart title, and a trend line.
2. Create a scatter plot that compares the EU (European) sales of games versus the global sales of games. Make sure to add in axis titles, a chart title, and a trend line.
3. Create a scatter plot that compares the JP (Japanese) sales of games versus the global sales of games. Make sure to add in axis titles, a chart title, and a trend line.
4. Create a scatter plot that compares other sales of games versus the global sales of games. Make sure to add in axis titles, a chart title, and a trend line.
5. Go back into each of your charts and modify the axes so that they are consistent for each chart.

- Without consistency of margins between your charts they could be considered misleading.

15 Minutes

Filtering Game Sales

Now that we know how to apply filters to a spreadsheet and create charts based on filtered data sets, we'll take some time to create charts which compare the sales of publishers against one another.

File

07-Par_FilterGameSales → VideoGameSales2_Unsolved.xlsx

Instructions

1. Create a scatter plot which graphs the critical response (Critic Score) of games published by Nintendo as compared to their global sales.
   - Only chart those games that have been reviewed. Games without any reviews should be ignored.
   - Add a chart title, axis titles, and a trend line to the graph that is created.
   - Copy your chart and paste it into an external program - paint, Microsoft Word, etc - before moving onto making the next chart.
2. Create a scatter plot which graphs the critical response of games published by Electronic Arts as compared to their global sales.
   - Only chart those games that have been reviewed. Games without any reviews should be ignored.
   - Add a chart title, axis titles, and a trend line to the graph that is created.
   - Copy your chart and paste it into an external program - paint, Microsoft Word, etc - before moving onto making the next chart.
3. Select all of the data on the worksheet and create a line chart which can be filtered by publisher, whose rows are set by a game's year of release, and whose values are the sum of global sales for that year.
   - Create a 2D line graph that charts this data.

15 Minutes

Golfing Targets

What better way to express moving averages than with a data set that is all about calculating the average accuracy of a golfer? We had 5 golfers take 20 shots onto a green and calculated the distance to the hole. It is up to you to find the moving averages of their shots using different intervals.

File

09-Stu_GolfingTargets → GolfingTargets_Unsolved.xlsx

Instructions

1. Using a moving average with an interval of 2, find the average shot accuracy for each subject. Then create a 2D line graph that charts these values.
   - Copy your chart and paste it into an external program - Paint, Microsoft Word, etc. - before moving onto making the next chart.
2. Using a moving average with an interval of 4, find the average shot accuracy for each subject. Then create a 2D line graph that charts these values.
   - Copy your chart and paste it into an external program - Paint, Microsoft Word, etc. - before moving onto making the next chart.

15 Minutes

Regression in the NBA

Your turn to run a regression analysis on the 2017 NBA Season.

File

11-Stu_NBAStats → 2017_nba_season_stats.csv

Instructions

Run a regression analysis on the 2017 NBA season stats.

- You will use PTS (points) as your Y variable, or dependent variable.
- You will determine which X variables, or independent variables, to use.
- After you have run regression, explain why your choice was or was not a good choice.
  - Do the results have a good R Square value?
  - Is your choice statistically reliable?
  - Explain what your coefficients mean.
- Finally produce a scatter plot and explain your overall analysis.

15 Minutes