

Activity 1-2

February 7, 2012

Task 0: Starting Point

By the time you start this activity, you should have done the following.

1. Follow the steps in Activity 1-1 to format the data.
2. Use conditional formatting to make the background of any blank cell red.
3. Rename `Sheet1` to `RawData` and `Sheet4` (the pivot table) to `PivotTable`.
4. Save your work (and save often!).

Task 1: Compare Votes to Ted Kennedy

1. Rename an empty sheet `KennedyCompare`.
2. Copy the column and row headers from `PivotTable` to `KennedyCompare`. Make sure that the column headers are in row 1 and the row headers are in column A.
Warning: when you click on data in the pivot table, Excel may give you a fancy address involving `GetPivotData(...)`; replace that with a normal address like `PivotTable!B5`.
3. Select `B2`. Write a formula (using cell references) that outputs the following:
B2 is a 1 if Akaka's vote on the first bill is the same as Kennedy's
B2 is a -1 if Akaka's vote on the first bill is different from Kennedy's
B2 is a 0 if either Akaka or Kennedy did not vote
4. In earlier task we were able to change the order of the conditional tests in an Excel function. Can we change the order here? Why or why not?
5. Before we fill the rest of the table, there is one more change we have to make to this function. What is it? Remember the `GradeSheet` example from HW1-1.

6. Fill the first row using `Fill...right`. What will Kennedy's row look like once we've filled it?
7. After the change is made, use the `Fill` function to fill the table. Verify your intuition about Kennedy's row.

Task 2: Rank each Senator

1. In `KennedyCompare`, add three columns on the right-hand side (use the `CountIf` function):
 - `num_agree` counts agreements with Kennedy's votes
 - `num_disagree` counts disagreements with Kennedy's votes
 - `num_not_voting` counts the votes where either senator was absent.
2. Then add a column - `rank` - that reports

$$\frac{\text{num_agree} - \text{num_disagree}}{\text{num_agree} + \text{num_disagree}}$$

What are the minimum and maximum values of this function?

3. For readability, copy the row headings to a column after `rank`.
4. Select the entire table and sort in decreasing `rank`. Look at the resulting data. Do you see anything surprising? Try to explain any surprises.