

# First Activity

*Sept. 14, 2010*

1. Open the spreadsheet you were working on last class and go to sheet 2; there you'll find 0s, 1s, 2s for missing, yea, and nay votes respectively. Make Sheet 3 have a table like that on page two (senators-by-votes), where a cell should contain 1, when the senator's vote on a bill agrees with Ted Kennedy's vote on that bill, -1 when it disagrees, and 0 when either Ted or the Senator was absent. Before you do so, think for a moment and decide what Ted Kennedy's row in this new sheet should look like.

**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 `Sheet2!B5`.

2. When you've built that new table of 1s, 0s, and -1s, add two columns on the right-hand side, one of which counts agreements with Ted, one that counts disagreements. (Hint: use `CountIf`). Then add a final column — **Ted-ness** — that shows  $(\text{agree} - \text{disagree}) / (\text{agree} + \text{disagree})$ . This equation should give us a similarity value to Ted that is between -1 and 1. Take a second to think about why this happens.
3. Now select the entire table and sort in decreasing order of Ted-ness. Look at the resulting data. Do you see anything surprising? Try to explain any surprises.