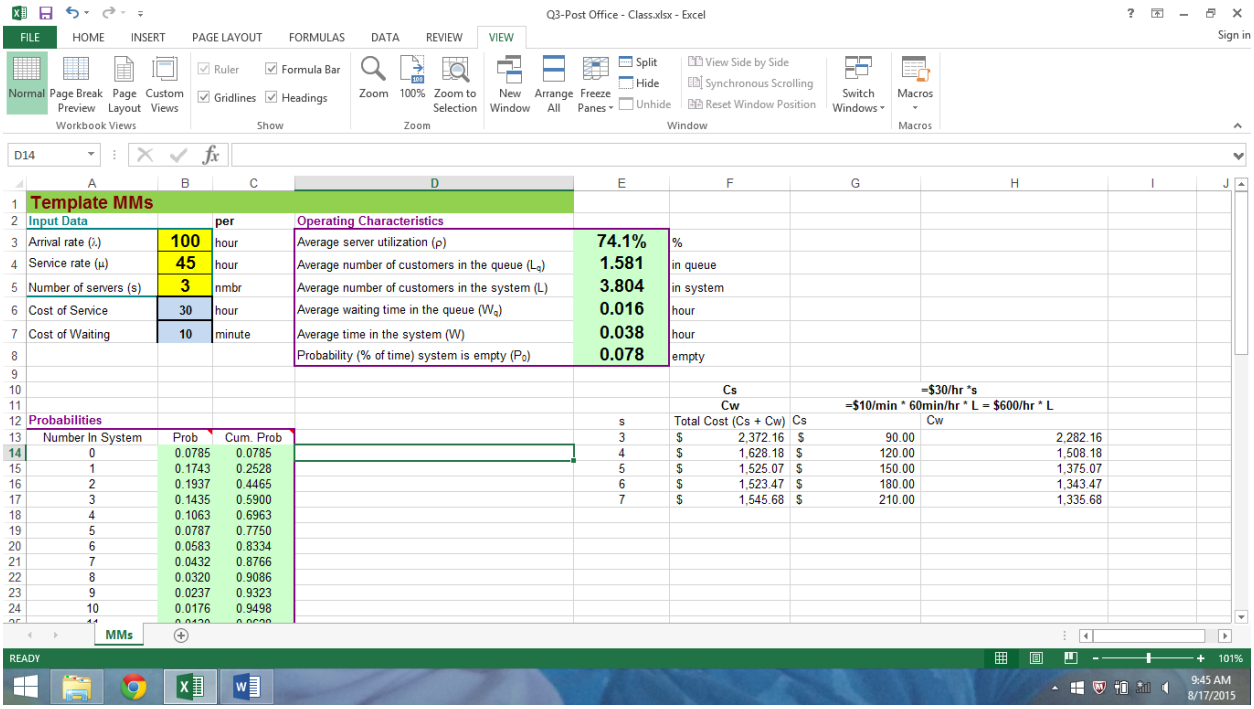
Goal Seek in Excel Review (Post Office Problem):

Goal Seek is a tool in Excel where you can set one cell to a fixed value (i.e., a goal), solving for another cell (which will be variable). Note that for this to work, the goal cell must depend via formulas/functions on the variable cell. The variable cell must be a regular (non-formula based) cell. For example, in our queuing template any of the yellow cells can be variable cells; and any of the green (or other cell that is derived from formulas based off the yellow cells) can be the goal cell.

Using the Data Table from Post Office Problem:



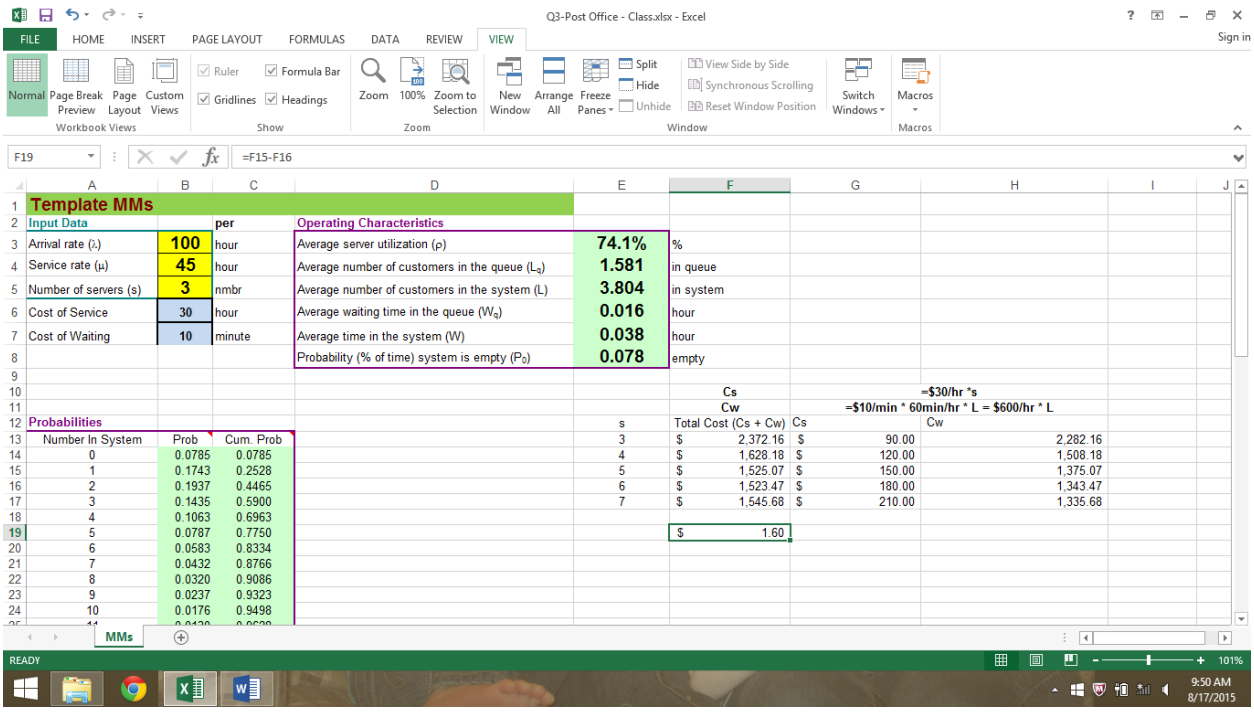
Recall,

The formula for Cs is $30/hr * # of servers. The # of servers is cell B5.

The formula for Cw is $600/hr * L. L is cell E5.

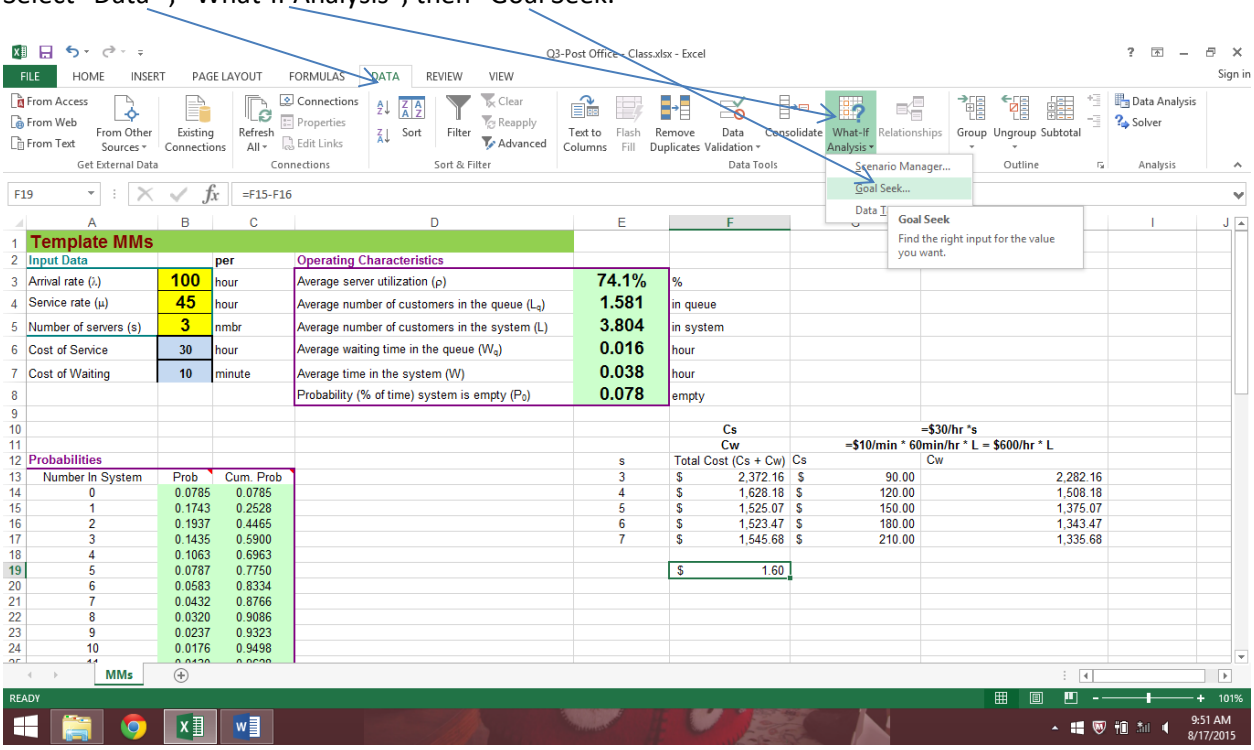
Now, what if we want to know at what service rate (μ) will the s = 5 (five servers) total cost equal the s = 6 (six servers) total cost. (Notice, they differ by less than $2 already.)

First, we need to setup a cell to determine the difference (via formula). So underneath the data table in cell F19; I do cell F15 MINUS (-) F16.

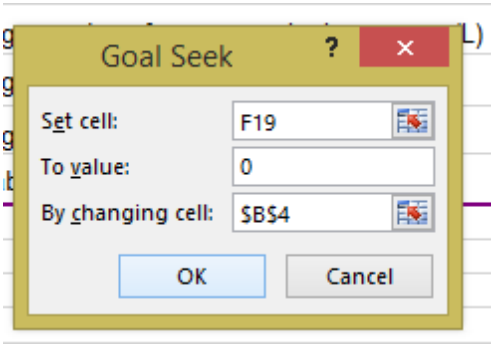


Now to setup Goal Seek, we need to highlight the difference cell and select “Goal Seek.”

Select “Data” ; “What-If Analysis”; then “Goal Seek.”

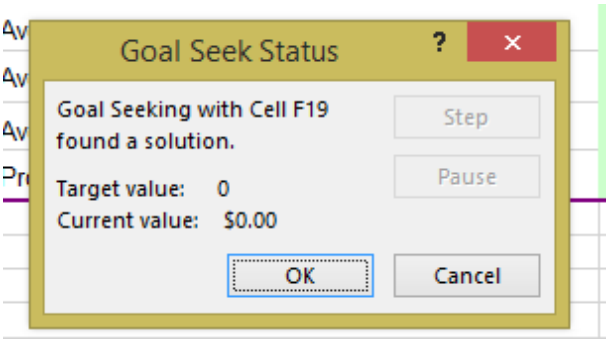


An input window will appear. F19 should be our “Set Cell,” we want the difference to be 0 (setting F15 and F16 equal to one another), and we want to change cell B4 (or B4) since that is our service rate cell.



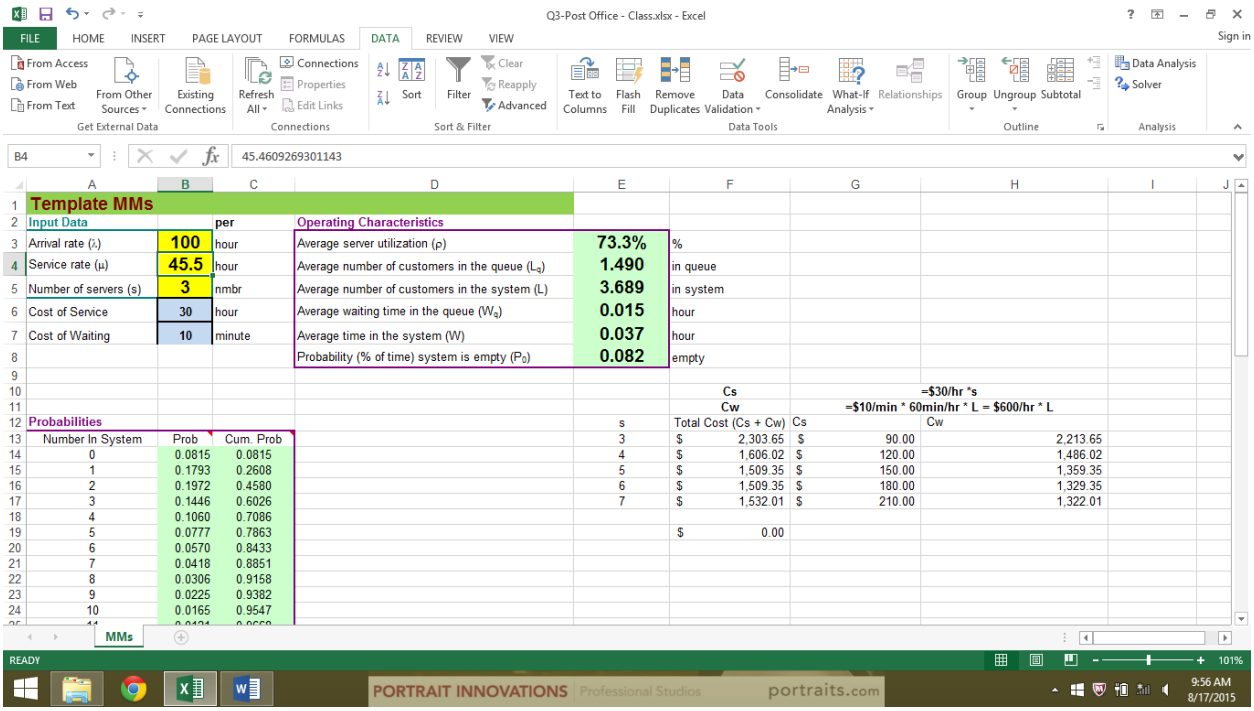
Then click “OK”

If a numerical solution is possible, and we don't have any other issues, Excel should find the feasible solution.



Click "OK" to accept answer.

And now you have your solution.



Note, the above example's service rate is ~45.5/hour (notice in the formula bar it is 45.4609 …)

At that service rate, s = 6 and s = 5 are equivalent at a total cost of $1509.35.