Adiabatic Flash using Excel

Goal: Solve these two equations simultaneously

1. Set up a cell for the outlet pressure and a cell for the outlet temperature with an arbitrary temperature (smaller than inlet temperature), and cells for the component mole fractions going into the flash, zi.
2. Set up Antoine’s Law for each component, referencing the arbitrary outlet temperature.
3. Set up K value cells for each component. K values can be found using the equation below.
4. Set up a cell for (V/F), entering an arbitrary value of 0.5
5. Set up a cell for the entirety of eqn. 1 above, referencing the cells you have set up for each of the variables.
6. Set up cells for each component exiting the flash, xi, yi. These can be found using the equations below.

7) Set up cells for all of the following: