Econ 8410

Problem Set #2

1. Use the infinite horizon small open economy model discussed in class (and sections 2.1-2.2 of our textbook) to answer the following questions. Assume $\beta(1+r) = 1$. Suppose that an economy starts with zero external wealth (initial $B = 0$) and with capital equal to the equilibrium value. For each of the scenarios below, sketch the paths of A, C, I, K, Y, CA, TB and saving. (Important note: only the original sock is unexpected, everything that happens afterward is know with certainty.)

    a. Suppose that at some point, there is an unexpected increase in productivity that is permanent, that is A goes up to a higher level and stays there forever.
    b. Suppose that at some point, there is an unexpected increase in productivity that is transitory, that is A goes up to a higher level but only for the current year and thereafter it falls back down to its original level and stays there forever.
    c. Suppose that at some point, there is an unexpected increase in productivity that is transitory but has some persistence, that is A goes up to a higher level and stays at this higher level for several periods before falling back down to its original level.
    d. Assume a Cobb-Douglas production function and choose some sensible values for the parameters of the model. Then solve the paths of the key variables numerically (use a spreadsheet or some other software, like R, MATLAB, or Mathematica).

2. Answer question #8 from Ch. 2 (think about your answers to question 1 above).