Your Uncle Sam has just won $25,000 in the Kentucky Lottery. He will share those winnings with your Project Team if you will help him decide how to invest his winnings. Prepare a report to Uncle Sam responding to his questions below in complete sentences, augmented by calculations as necessary.

Unless otherwise instructed, please use conventional rounding in determining dollar amounts to the nearest penny and round all interest rates to two decimal places when expressed as percentages.

Uncle Sam says: “I am considering investing in three different banks. Bank A has a 4-year CD which pays 4.20% compounded monthly the first year, 4.36% compounded monthly the second year, and 4.92% compounded monthly the third and fourth years. Bank B has a 4-year CD (Certificate of Deposit) that pays 4.54% compounded quarterly. Bank C has a bond which will cost $25,000 and pay $30,000 at the end of the four years.”

1. “If I invest my winnings in Bank A or Bank B how much will it be worth in four years?”
2. “What are the annual percentage yields (APYs) for the CDs from Banks A and B?” (Note: for the APY of Bank B see Section 1.5 of the text.)
3. “What is the annual percentage yield (APY) that the bond from Bank C is paying?”
4. “Which of these three banks is the best investment, and which ranks second?” (Be sure to use your work in 1., 2., and 3. to address this question. Also explain why or how the calculations from 1. lead to the same ranking as the calculations from 2. and 3.)
5. “The Trust Department of Bank B above is also willing to guarantee its stated rate of interest for the next 40 years. What is the minimum number of quarters that my $25,000 winnings will have to be invested with Bank B until it reaches at least $100,000 in value? How long is that in years and months? At the end of this full number of quarters, what will the actual value of my investment be?”
6. “Boy, I’d really like to purchase a certain new Honda that now sells for $28,000 (to the nearest thousand dollars)! If Honda projects that the price of this model will rise at a rate of 2.8% compounded annually over the next four years,
   (a) What will be the cost of this car four years from now, and
   (b) At what APY do I need to invest my $25,000 winnings now in order to have enough money to pay cash for that Honda four years from now?”
7. “A friend of mine doesn’t trust banks. He suggests burying my $25,000 in a coffee can in my back yard! If I do that, and if inflation is 3.0% for the next 8 years, what will be the purchasing power in today’s dollars of my $25,000 winnings at the end of those 8 years?”

If your Project Report is insightful and cogent enough, with correct calculations and well-reasoned conclusions, Uncle Sam promises to share his winnings with you!

Be sure to fill in and submit the Cover Sheet on the back with your project!

Your project report must be typed or printed via word processor. The body of the report should be written in complete sentences, augmented by calculations, charts and/or tables (these may be hand drawn). The report must contain a clear statement of each question as it is addressed, explain what your conclusions are, and the calculations made and reasoning used to reach those conclusions.