Key to Quiz: 2/6/12

Quiz: Assume you want to withdraw $100 per quarter from an account that pays an APR of 6.5% with monthly compounding. You first withdrawal will occur three years from today and your final withdrawal will occur four years from today. To fund this account, you plan to make a series of monthly deposits into the account. The first deposit would occur two months from today, the final deposit would occur two years from today, and each deposit would be 1% larger than the previous one. How large should you make your first deposit?

\[
r \left( \frac{1}{12} \right) = \frac{.065}{12} + \frac{1}{2} \]

\[
r \left( \frac{1}{4} \right) = \left( 1 + r \left( \frac{1}{12} \right) \right)^4 - 1
\]

\[
PV_{2yrs,9mo} = \frac{100}{r \left( \frac{1}{4} \right)} \left( 1 - \left( \frac{1}{1 + r \left( \frac{1}{4} \right)} \right)^9 \right)
\]

\[
PV_{2yrs} = \frac{PV_{2yrs,9mo}}{\left( 1 + r \left( \frac{1}{4} \right) \right)^3}
\]

\[
FV_{2yrs} = \left( \frac{C}{r \left( \frac{1}{12} \right) - .01} \right) \left( \left( 1 + r \left( \frac{1}{12} \right) \right)^{23} - (1.01)^{23} \right)
\]

=> set equal and solve for C

WSJ1: What source of recent bank profits could soon dry up according to the Wall Street Journal?
a. low rates at which banks can borrow
b. "releasing" reserves against bad loans
c. trading profits
d. high interest rates on credit cards
e. profits from selling foreclosed homes

WSJ2: On Friday, what plans did Caterpillar announce for its 62-year-old plant in London, Ontario, where it had locked out workers since January 1 over a contract dispute?
a. it will reopen and expand the plant after the company and the UAW agreed to a new contract
b. it will sell the plant to General Electric
c. it will sell the plant to the Ontario government
d. it will close the plant
e. it will reopen the plant while continuing to negotiate with workers over a new contract

WSJ3: Bailed out by the government just three years ago, General Motors Co. is likely to report on February 16 that
a. it will finish repaying funds it received from the U.S. government in mid-2012
b. a record profit in 2011 of $8 billion
c. its 2011 sales exceeded all other manufacturers for the first time since 1998
d. it will pay its CEO, Daniel Akerson, an expected bonus of $125 million in 2012
e. all of the above