

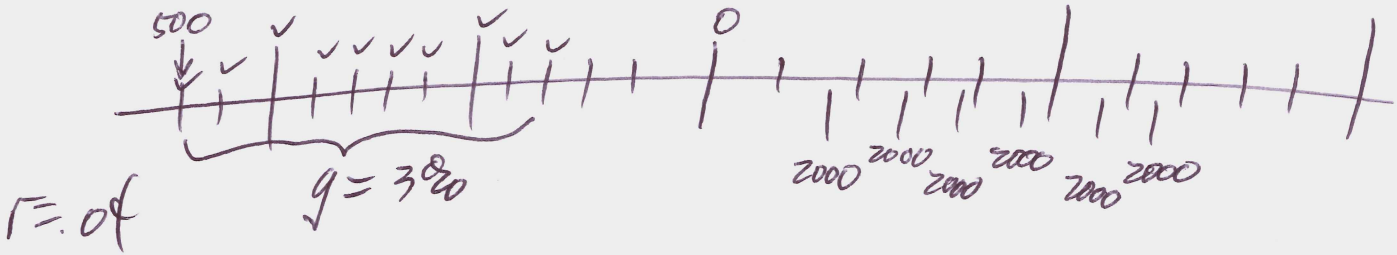
Quiz B: 1/30/13

Name Key

Note: On this quiz, you do not need to solve anything. Just set up all equations, plug in all the numbers you would need to solve the equations, and for each equation indicate which variable you are solving for (if you are solving for something other than the left-hand side of the equation...the variable to the left of "=").

Twelve years ago you made the first of a series of annual deposits into an account earning an interest rate of 4% per year. Your last deposit into this account was three years ago. Your first deposit was \$500 and you increased your deposits by 3% per year. From this account, you plan to make annual withdrawals of \$2000 each starting one year and seven months from today that will continue through six years and seven months from today (the date of your final withdrawal). What additional, single deposit should you make today to fully fund your withdrawals?

Wall Street Journal Questions are on the back of this page.



Deposits

$$+3 (FV_{-3} = \frac{500}{.04 - .03} ((1.04)^{10} - (1.03)^{10}))$$

$$+3 (FV_0 = FV_{-3} (1.04)^3)$$

Withdrawals

$$+3 (PV_{7.17} = \frac{2000}{.04} (1 - (\frac{1}{1.04})^6))$$

$$+3 (PV_0 = PV_{7.17} (\frac{1}{1.04})^{7.17})$$

$$+4 (\text{Deposit today} = PV_0(\text{withdrawals}) - FV_0(\text{deposits}))$$