

How to calculate retirement funds

[Economics](#), [Money](#)



To calculate the present value of interest and principal payments, you will need to use the NAP function, rather than the UP function, since the cash flows in the principal and interest columns are not constant throughout time.

] What do you observe when you look at these numbers? Explain. (c) Using your amortization table, what is the principal that remains to be paid after you have completed 15 years of payments? How does this figure relate to the payments that you have already made? How does this figure relate to your remaining payments? Explain. (d) Suppose that you had bought this house in June of 2006 under the terms scribed above.

Since that date, the average house has declined in value at the rate of 1% per month. [This is the national average for the 3-year period ending summer 2009.] Assuming that you also experienced this price decline on your house, at what point in calendar time will you owe more in principal on the loan than the house is worth? Assume throughout that you make every payment on time and that house prices continue to decline until at least this point in time. Answer the same question if you had paid 30% down Instead of 10%. Explain why your answers are different. E) Now suppose that your house from part (d) was located In Miami, FL.

The average decline in housing prices over this time period in Miami was about 2% per month for the last 4 years. Assume that your house's price declined by the same amount as the average house in the Miami area. How does a 2% decline change your answers to part (d)? Are the answers the same or different? Explain. NOTE: For questions prepare a spreadsheet model for part. Use this spreadsheet model with additional calculations for

part b, c, d, e. Written answers to the questions in b, c, d, and e should be placed on a separate worksheet in the same document. 2.

Suppose that your salary at age 25 is \$72,500 and that you are paid on a monthly basis. You plan to retire at age 65 and will need 75% of your last year's salary as income after you retire for living expenses. You have saved \$55,000 to date. You want to build your dream home to live out the rest of your life in at age 50. Based on current prices and an inflation rate that is expected to rise at 1% per year, elegantly, you project this home will cost \$1,000,000 to complete. You have some older relatives that have always had an interest in you and have indicated that you are in their wills. Assume that you will inherit \$100,000 in 5 years.

Assume that you like to travel and plan to take one nice trip every year starting at the end of your first year of retirement until age 75. The average price of the kind of trips you would like to take is \$5,000 today and will rise with inflation. You project that your salary will grow at a rate of 2% and that your retirement income needs will grow at 1%. Finally, assume that you expect to live to age 85 and that you wish to have a balance at the end of your life that is equal to the present value of 5 years of your needed income. The appropriate interest rate for your working life is 9% and declines to 6% after you retire.

Both rates of return are nominal. Assume that growth rate and interest rates are quoted as annual figures and reported as EAR's. A) What % of your monthly salary do you need to start saving to meet your expected needs? Find the solution to this problem by taking all cash flows to the present (I. E.

Age 25) b) Verify that your monthly savings from part a plus your initial savings and inheritance described above will allow you to pay for the house at age 50. NOTE: Build a spreadsheet model to answer these two questions and place it in the same document as your answers to questions 1 .