Example

One starts with a salary of $40,000 that grows exponentially at a rate of 3% for 32 years reaching a salary of $104,467.86 at retirement. The initial investment of $50,000 is being added to by 15% of salary for 32 years accumulating to $950,052.41.

After 32 of income from salary the individual starts to withdraw $50,000 which increases at the rate of 1.5% compounded continuously. The investments continue to grow at 4.5%. The nest egg will last 28.13 years at which time the investment is at $0. At the life expectancy of 25 years the balance is $217,658.

The table shows the 32 years up to retirement and the 28.1 years that the nest egg can last.

The graph shows the ups and downs.

Retirement Calculations Graphically
Prof. Richard B. Goldstein

Retirement - saving and spending

example

40000	S = Current Salary ($)
50000	C = Current Value of Retirement Savings ($)
5	r = rate of growth of investments until retirement (%)
3	g = rate of growth of salary until retirement (%)
32	n = no. of years until retirement
15	p = percent of salary saved for retirement (%)
50000	W = Yearly withdrawal when retired ($)
25	L = Life Expectancy or no. of years needed
4.5	i = rate of growth of investments once retired (%)
1.5	j = rate of growth of yearly withdrawal (%)

Calculate! Clear

950052.41	T = Total Amount saved at Retirement
104467.86	FS = Final salary
28.13	X = no. of years $W can be expected to last

Table of Savings:

Year	Amount
0	50000
5	100859
10	172095
15	270456
20	404763
25	586520
30	830710
32	950052
0	950052
5	899041
10	812516
15	679750
20	487178
25	217658
28.1	0