

Planning Templates

Excel-Based Financial Planning Tools
Planningtemplates.com

Explanation Notes
Plus Version 3.00

Planning Templates

Plus Version 3.00 Explanation Notes
Planningtemplates.com

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Overview – Version 3.00

Planning Templates are designed to provide all of the basic financial calculators needed to quantify most financial goals. They are intended for use by individuals who are considered financial “accumulators”. These calculators are part of the same **Excel 97** “workbook.” Some Planning Templates workbooks may contain macros (sub-programs). If this is the case, when opening the file a window will appear that invites choosing what to do with the macros. Select “Enable Macros” and the file will open with all macros functioning. Once the calculator file has been opened in Excel all of the calculators will be listed by name at the bottom of the screen on the worksheet tabs. To move from one calculator to another simply click on the appropriate tab.

Each calculator is set up so that data may be entered only in appropriate cells. All other cells are locked. To move between all of the data entry cells while in each calculator simply click on the cell in question. **All data entry cell characters are shown in red.** Most answers that are calculated will be **blue** or **black**.

To maximize the viewing area on the screen while using the calculators, select the “view” pull-down menu at the top of the screen and then select “full screen”. To reverse this setting, repeat the same sequence.

All Calculators can be printed.

Financial Foundations Outline – Version 3.00

The Financial Foundations chart is a prioritized outline that shows all of the areas of the financial planning process. Start at the bottom of the chart with **step one** by beginning to properly manage cash flow. In **step two** establish a cash reserve and put adequate insurance coverage in place. In **step three** begin to look to the future by accumulating wealth. **Step four** addresses estate planning and business planning issues.

One exception to the order of this outline is establishing a will. It should be done even at the beginning of the planning process.

This outline is not intended to be an exhaustive list of items that could be in each category, but rather a representative listing to give general category guidelines.

Net Worth Statement – Version 3.00

All data entry cell characters are shown in red.

Net worth is a measure of the value of an estate. It is the value of what is owned, less the value of what is owed. To figure your net worth using the calculator enter the total value of what is owned and the value of what is owed, in each category listed. The Net Worth Calculator indicates the percentage of the total that each category represents and the calculator provides a total net worth figure.

A net worth total is merely a “snapshot “ of where one is today. Your net worth is a number which should be checked periodically and a number which should grow.

Budget Worksheet – Version 3.00

All Data Entry cell characters are shown in red.

The Budget Worksheet is designed to assist in planning monthly spending.

Begin at the top by indicating the number of paychecks you and your spouse receive each year. If paid every two weeks put 26, if you are paid twice-monthly put 24 in the cell, etc. After that, enter total pay before anything is taken out for taxes or any other withholding. Next, list all of the things that are withheld from each paycheck. The calculator should then indicate take home pay. As this data entry for each paycheck(s), the calculator totals your combined monthly and annual pay.

In the bottom section of the worksheet enter all of the monthly expenses. The Calculator then indicates how that number breaks down into a weekly and an annual number. It also indicates the percentage that each category is of the total pay. The bottom section keeps a running total of the expenses entered at the top of the expense column. If the expenses entered ever total more than the take home pay a warning message will appear at the top of this section saying “Exceeds your take home pay.” If this occurs, reduce some of your monthly expense entries.

In the upper right hand corner of the calculator indicate the number of months of cash reserve needed. The calculator then multiplies take home pay by the number of months.

Life Insurance Calculator – Version 3.00

All Data Entry cell characters are shown in red.

The life insurance calculator will help determine how much life insurance is needed, relative to what the family will want to accomplish in the event of an untimely death. Answer the questions and the calculator indicates the appropriate amount of life insurance. Two life insurance models have been included in the advisor version to allow for “his & hers” capability.

Data Entry:

Inflation assumption: This determines how much the survivor’s income will need to increase each year to account for the increase in the cost of living. 3% - 4% is a safe range.

Investment Rate of Return: Indicate the rate of return assumed that the invested insurance benefits will achieve each year to create the survivor’s annual income.

Final Expenses: Indicate here what it is assumed funeral and related expenses will cost.

Debts to be paid off: Self-explanatory. List a total number.

Retirement Assets to be liquidated: Usually (but not always) at someone’s death, any retirement assets they possess (401K plan, Etc.) will be cashed out, and the proceeds become part of the money available to meet the family’s needs. Indicate here the amount if any that will remain from retirement accounts after any applicable taxes have been taken out.

Other Financial Goals to Be Funded: This is a catchall. If you desire a survivor to purchase a new car, for example, indicate the price of such a goal here.

Survivor's Income need: How much income each year do the insurance proceeds need to provide? List that income number in today’s dollars here.

Survivor’s age: List the survivor’s current age.

Survivor Needs Income Until?: List here the age through which an income stream from the insurance proceeds will be needed. This doesn’t have to be for the survivor’s entire life if it is possible that another income source will be available at some point.

Extra Income while children are dependent: Put here any extra income it is assumed survivors will need during the time they still live at home. This assumes a fixed amount (although inflated each year).

Last child leaves home in ____ Years: This is for indicating how long the supplemental income for the children will need to last.

Lump Sum needed to fund child's education: Create these numbers in the Education planner. This is the total amount of money, which if invested today at an assumed rate of return, will grow enough to totally fund that child's education.

The life insurance calculator print out should be placed in the front cover of the policy it represents. This provides an excellent set of marching orders for the surviving family.

Education Planner – Version 3.00

All Data Entry cell characters are shown in red.

The education planner considers one child at a time. It assumes that money will be saved until a child enters school, but you will not contribute anything beyond that point. Enter the child's name, age and the year he or she should begin college. You will also enter the annual cost of school, in today's dollars, for a school like the one the child will attend. Consider calling a representative school to get an estimate of what room and board; tuition, books and fees are estimated to cost per year at such a school.

Inflation for colleges has been averaging approximately 7% annually over the last decade.

What Lump Sum Today (less current savings) Will Fully Fund Goal?: This answers what amount of money, over and above your current education savings, invested at an assumed rate of return, will fully fund the goal.

Lump Sum Needed at Beginning of School: This indicates the amount of money needed in an account when a child begins college, assuming no more savings are contributed to the account.

Monthly Savings required: This indicates how much is needed to set aside to achieve the goal.

Repeat this process for each child.

Accumulation Goal – Version 3.00

All Data Entry cell characters are shown in red.

The accumulation calculator is designed to help you save to pay cash for a specific purchase. For example, assume the goal of paying cash for an item that costs \$5000 in today's dollars.

Data Entry:

Beginning Deposit: Indicate here any money saved or designated for this purpose. In the example \$1000 is in the account already.

Assumed rate of return: Indicate here the investment rate of return desired for this savings goal. It is wise to use the return expected to be achieved after any investment fees or taxes are extracted.

Goal in today's Dollars: Enter here the cost of the item to be purchased, in today's dollars.

Years for savings: Enter the number of years before the purchase is made.

Inflation Assumption: Indicate the inflation rate you assume will be experience over the specified time frame of this savings goal.

Payments at Beginning/End of Period: Use the pull-down menu to select whether the periodic payment will occur at the beginning of the period of at the end of the payment period. If this makes no sense to you, select beginning and move on.

The calculator then tells what the item will actually cost at the end of the savings period, and how much is needed to save each month to reach the (inflated) goal.

Future Value of Savings – Version 3.00

All Data Entry cell characters are shown in red.

This calculator is designed to help you know what your savings will be worth in the future taking into account an assumed rate of return on your investment.

Data Entry:

Beginning Deposit: Enter here any money you have on hand now, that is designated for this goal.

Periodic payments: Enter here the dollar amount of any periodic additions you expect add to this account.

Payments at Beginning/End of Period: Use the pull-down menu to select whether the periodic payment will happen at the beginning of the period of at the end of the payment period. If this makes no sense to you, select beginning and move on.

Frequency of Payments: Use the pull-down menu to indicate the frequency of the periodic additions to the account.

Number of years: Enter here the number of years savings will be allowed.

The calculator then tells how much money will be in the account after the specified number of years.

Loan Calculator – Version 3.00

All Data Entry cell characters are shown in red.

This calculator determines the periodic payments required for any loan. Indicate the **dollar amount** of the loan, the loan **interest rate**, the number of **payments per year**, the **number of years** in the term of the loan, and the calculator indicates the necessary loan payments.

The total cost of the loan is the total number of payments multiplied by the amount of each payment. This will underscore the cost of borrowing money. It is not recommended to borrow money for depreciating items. The Cash for Car calculator illustrates for you how paying cash for cars instead of borrowing can benefit the bottom line of a retirement nest egg.

Rate of Return – Version 3.00

All Data Entry cell characters are shown in red.

If you know the beginning balance of any investment account and the ending balance after a certain number of months, this calculator will compute the rate of return achieved. For example: A mutual fund account that has \$5,000 at the beginning of 1998. The investor has been adding to the account \$100 monthly. The account balance at the end of 1998 was \$7,000. This calculator will indicate that you experienced a 3.57% return in this account over the 12-month period.

Beginning Balance: Enter here the starting account balance from the beginning of the time frame you want to ascertain the rate of return.

Monthly Additions: If additions have been made to this account on a monthly basis, enter here the amount of monthly contributions. This calculator will not accommodate additions of any other frequency.

Number of Months in Period: If a one-year period is being examined enter 12 (for 12 months in year) in this cell. If you are looking at a year and a half enter 18, etc.

Ending Balance: Enter here the balance at the end of the examination period.

Your Annualized Return Over Specified Time Frame: This is the return achieved over the months indicated.

This calculator can be helpful when in looking at a statement from your mutual fund family indicating your account balances a year ago relative to today. Keep in mind additions made to the account changes the calculation. This calculator accommodates a systematic monthly additions. Additions of other frequencies will require a more sophisticated calculation.

Retirement #1 – Version 3.00

All Data Entry cells show up in red.

This calculator examines your retirement savings or accumulation phase, and then looks at how long your money will last through the distribution or retirement phase. We assume that you and your spouse will retire at the same time, keying off of your age.

Data Entry:

Accumulation Phase

This phase looks at the period from now, until you retire. During this phase you will be accumulating money to provide your income in retirement. This calculator is designed with the individual in mind who has a retirement savings plan where you defer some of your pay into the plan and you have an employer who may be matching some of your contributions.

Data Entry:

Annual Pay: Enter here your total annual pay as well as your spouses pay (on the right side of the top section).

Rate of Return: This is the earnings rate you want to assume on your savings plan investment.

% Of Pay Contributed: Enter here the percentage of your annual pay that you direct to your savings plan. You will notice that you can enter the percent of your pay that your employer is contributing to the plan by way of matching dollars.

Retirement Age: Enter here the age at which you want to retire.

Current Age: Enter here your current age. This is merely to identify the number of years between now and when you anticipate retiring. This calculator assumes you and your spouse will retire at the same time, which is most likely the most common scenario.

Years to Retirement: This number is calculated for you. It is the difference between now and your retirement time.

Contributions per Year: If you are contributing to your plan on a monthly basis enter 12 here. If you contribute quarterly, enter 4 here, and so forth. It is possible that you may pay into the plan on a monthly basis and your employer may contribute the matching dollars quarterly. If so, this calculator will accommodate this pattern.

Cost of living raise: This entry is to accommodate an annual increase in the amount you are contributing to the plan. If, for example you contribute 5% of your annual pay to the plan, and you assume that your income will increase each year by a certain percentage, this entry causes your 5% annual contribution to grow proportionate to your pay increase.

Beginning Balance: Enter here any money you currently have accumulated in all of your retirement accounts combined. You will enter a value on the right side if your spouse also has money set aside in a retirement savings plan.

The remaining part of the top section of this calculator summarizes your contributions to the plan in the current year and the future value of your beginning balances to your plans, your contributions and your employer's contributions. The Total amount at retirement value is the total cumulative amount you will have at the specified retirement age from all sources. Next to the total amount at retirement you can enter an inflation rate and the calculator will tell you what your future retirement nest egg is worth in today's dollars.

Retirement Distribution Phase

This section carries your retirement nest egg value calculated in the top section down to the retirement phase. This section evaluates how long all of your money will last as you begin to withdraw it for income. This section also considers the fact that you may have income coming from several different sources.

Data Entry:

Investment Return: Enter here the investment rate of return you want to assume your money will earn during retirement. Some people will want to assume a more conservative return rate in this phase of their financial life.

Next, you will see several columns that are illustrating your age each year, your nest egg account balance each year, and your retirement income coming from three different sources (your investments, Pension, & Social Security). In each of these columns you can indicate at the top the income you anticipate from each source (in today's dollars) and the cost of living raise (or inflation rate) you assume each income source will experience through time. If you scan down each column you can see how your nest egg (investments) will last, as well as how each income source increases at the cost of living or inflation rate you entered at the top. You can then raise or lower any of your data entries at the top to vary the time your assets will last. This is a trial and error exercise. In planning it is wise to take into account a worst case situation. We have therefore built this calculator to withdraw money from your nest egg as a lump sum at the beginning of each year. If you withdraw money monthly, depending on the earnings rate, your nest egg may last several more years.

Retirement #2 – Version 3.00

All Data Entry cells show up in red.

This retirement calculator is for someone who is already retired or who is close enough to ignore the accumulation phase. In this calculator you will evaluate how long your assets will last under several different income levels.

Data Entry:

Money @ Retire: Enter here the money in your retirement nest egg (your investments).

Rate of Return: This is the earnings rate you want to assume on your savings plan investment.

Ann. Withdrawal: Or Annual Withdrawal. Indicate here the money you expect to withdraw from your investment money each year to make up part of your income stream.

Current Age: List your current age.

Current Year: Self-Explanatory

Annual Pension Income: If you are receiving money from any pension plans list the combined total here.

Ann. Social Security: List here your combined annual social security income.

Annual Cost of Living Raise: In this section enter the cost of living raise you expect to receive from each income source.

Next, you will see several columns that are illustrating your age each year into the future, your nest egg account balance each year, and your retirement income coming from three different sources (your investments, Pension, & Social Security). If you scan down each column you can see how your nest egg (investments) will last, as well as how each income source increases at the cost of living or inflation rate you entered at the top. You can then raise or lower any of your data entries at the top to vary the time your assets will last. This is a trial and error exercise.

In planning it is wise to take into account a worst-case situation. We have therefore built this calculator to withdraw money from your nest egg as a lump sum at the beginning of each year. If you withdraw money monthly, depending on the earnings rate, your nest egg may last several more years.

Retirement #3 – 11/2000

All Data Entry cell characters are shown in red.

In retirement, income will most likely come from several different sources; investment income, pension, social security, and possibly another source. You will not have much control over most of these at this point of your life. The one you can have the greatest influence over is investment income. This calculator helps you compute how much money you will need to save in order to generate the investment income needed to meet your investment goals.

Data Entry:

Annual Retirement Income Needed: Enter in today's dollars the amount of annual income desired for each of your retirement years.

Assumptions:

Current Savings: Enter here the total dollar amount of investments presently set-aside for retirement.

Current Age: Self-explanatory.

Retirement Age: Enter the age at which you plan to retire.

Years until Retirement: This number is calculated for you.

Years Needing Retirement Income: If you plan on retiring at age 65 and expect to need retirement income until age 95, enter 30 here. (Total number of years between 65 and 95)

Investment Return before Retirement: Enter here the investment rate of return assume will be achieved prior to retirement.

Investment Return after Retirement: It is possible that you may become a more conservative investor after you retire. This entry and the one above, allows the flexibility to assume one investment return before retirement and a different one after retirement.

Inflation Assumption: Enter here the inflation you think will be experienced on average in the future. This will increase the income need to meet future purchasing power demands. 3-4% is a reasonable entry here.

The calculator then outlines the investment lump sum needed at the beginning of your retirement years to generate the income that will be derived from investments, for the specified number of years. The last number illustrated in the model is the amount you need to be saving on a monthly basis to achieve the goal. Keep in mind that this monthly savings requirement may partially be met with employer matching dollars.

Taxable or Tax Free Equivalent Yield – Version 3.00

All Data Entry cell characters are shown in red.

These two calculators are built to address the same idea from two different perspectives.

The top section calculator determines what taxable rate of return is equal to a known tax-free (exempt) return. **For example:** You are a Muni-Bond investor and you are receiving a 5% tax-free yield. At your assumed tax rate of 36% the taxable equivalent yield would be 7.81%. In other words, if you could find a taxable investment yielding 7.81%, this would be the same as investing in a tax-free investment at 5%, for someone in your tax bracket. (After paying taxes on the 7.81% earnings in the taxable investment, the same amount is left over as was achieved in the tax-free investment). If you could find a taxable investment yielding more than 7.81%, the taxable investment would be the best choice.

In **the bottom section**, the taxable rate of return is known and you are solving for the tax-free equivalent.

Mortgage Calculator – Version 3.00

All Data Entry cells show up in red.

This calculator figures the **Principle & Interest** payment on any term mortgage. Enter **the loan amount**, the **interest rate** and the **term** of the loan. The **principle & interest** payment will be indicated for you. Keep in mind that your **taxes & insurance** payments will be over and above this amount and will vary from property to property. If you want to evaluate the effect of an extra monthly payment you can enter that also and the calculator tells you at what point the loan will be paid off. Another feature of this calculator is the ability to enter any year of the loan term and see the total interest paid from day one through that year, as well as the total principle paid, total Principle & Interest paid, and the principle paid through that same time frame. You can also determine the interest paid in any given year, for example by subtracting the interest paid through year 11 from the interest paid through year 10.

Prepaid Mortgage – Version 3.00

All Data Entry cell characters are shown in red.

The Prepaid Mortgage is actually two calculators. It will figure when a mortgage will be paid off if a specified extra monthly payment is made, or what extra monthly payment will be required to pay a mortgage off in a specified time frame.

With A Specified Time Frame:

Balance Due: Enter the balance due on a mortgage.

Interest Rate on Loan: Enter the rate on a current mortgage.

Current Principle & Interest Payment: Enter only the current Principle & interest payment. Do not include any taxes or insurance payments here.

To Be Paid Off In How Many Years?: Enter the time frame (number of years) in which you want to pay off the mortgage.

The calculator then tells you how much extra per month you will need to pay to accomplish the goal.

With a Specified Extra Monthly Payment:

Balance Due: Enter the balance due on the mortgage.

Interest Rate on Loan: Enter the rate on the current mortgage.

Current Principle & Interest Payment: Enter only the current Principle & interest payment. Do not include any taxes or insurance payments here.

Anticipated Extra Monthly Payment: Enter the extra monthly payment you will make.

The calculator figures when the loan will be paid off, in number of years.

Refinance Your Mortgage?: – Version 3.00

All Data Entry cell characters are shown in red.

This is a worksheet to determine the break-even point if a mortgage were refinanced. The break-even point is the amount of time needed to stay in your present home to realize any actual savings from refinancing the mortgage. Obviously, refinancing will something. Therefore, even though the new payments after refinancing will be lower, it will take some time for this “savings” to pay you back for the cost of refinancing. This is your break-even point.

Notice that this worksheet itemizes the likely expenses incurred when refinancing. List them separately or simply group all expenses as one item in entry #12, Any Other Expenses. Then enter the current mortgage payment followed by the new payment after refinancing. The calculator will then figure the break-even point as a number of months figure.

Short Term Mortgage or Long Term Mortgage (With Side Savings)? - Version 3.00 15 or 30

All Data Entry cells show up in red.

If your goal is to pay your mortgage off in 15 years, you basically have a choice to make. Conventional wisdom says to buy a 15-year mortgage, however one needs to consider the fact that there may be a more efficient way to accomplish the same goal. This calculator compares the use of a short-term mortgage with a longer-term loan coupled with a side savings account. It is true that purchasing the 15-year loan may help one who lacks the necessary discipline to invest on the side. Many popular financial strategies require discipline to implement successfully, for example buying term insurance and investing the difference.

In this model you will enter the term of each loan. The most common comparison will be a 15-year loan to a 30-year loan, however you can examine any term loan you wish.

Data Entry:

Term: Enter the number of years in each respective loan.

Rate: Enter the interest rate on each loan. Keep in mind the 15-year loan will not have the same rate as the 30-year loan. You should be able to look up averages for the 15 and 30-year mortgages in the newspaper, or use specific quotes from your mortgage company.

Loan Amount: Enter the amount of money you will borrow. You will notice that you only need to enter a value for the short-term loan. This same number will be carried over to the correct slot for the longer-term loan.

Side Savings Entries

% You pay in Taxes: Enter here your tax bracket, or better yet the actual percentage you actually pay in taxes. Usually someone in a 28 % tax bracket, for example, will actually pay something less than 28% in actual taxes.

Pre-Tax Rate of Return: Enter here the gross return you would like to assume for the investment you will select for the side savings. The calculator will then, based on the tax rate you enter above, figure the net after tax rate of return you will achieve on the investment. That rate assumption is then used in the future value calculation of the investment.

Comparison Overview:

You will notice that on the short-term mortgage (for our discussion 15 years) the loan is paid off after the specified term. The calculator also shows the cumulative interest you have paid over the life of the loan. If this mortgage is on your primary residence, and you itemize your deductions, then this number indicates the amount of interest you can deduct if this loan is used.

On the right side of the model the calculator indicates the balance due on the 30-year loan at the point that the short-term loan is completed. In our example this is at the 15-year point.

Additionally, the right side indicates the account balance on the side savings account at that same (15-year) point. If the investment performance of the side savings is significant enough, you should

have enough in the account to pay the 30-year mortgage off and pocket some extra money. Another point to note is that the cumulative interest paid on the 30-year mortgage should be higher than on the 15-year loan. This means you should have greater tax savings from the long-term mortgage. In addition to the potential higher tax deductibility of the long-term mortgage, you have obligated yourself to a lower monthly loan payment. In the event of financial difficulty you can stop the contributions to the side savings account and concentrate on your mortgage payments. On the 15-year loan you are still obligated to make the higher payments.

Keep in mind that there are many variables that determine the best plan for you. If you do not have the discipline to invest the difference in the side savings, you may need to consider the 15-year loan. In some cases the math will point you to the 15-year loan. This calculator will help you draw your conclusions from real information, as it applies to your specific situation.

Mutual Fund Growth & Expense Comparison – Version 3.00

All Data Entry cells show up in red.

There is an ongoing debate about whether you should buy a mutual fund with a front-end load (sales charge) or whether you should buy a No-load fund. We built this calculator to illustrate for you the effect of rates of return, front-end sales charges and annual expense ratios on fund performance.

Most financial magazines that report on mutual fund historical performance will tell you if the fund has a front-end load and what the annual Expense ratio is for each fund. The expense ratio is a percentage of the fund that the Fund Company extracts to cover its expenses for operating the fund. Most companies assess and extract the expense ratio on a daily basis. For our purposes, this calculator extracts the annual expense ratio amount as a lump sum at year-end. This is slightly different than reality, but both funds will be treated the same, providing a level playing field for this comparison.

Data Entry:

Pretax Rate of Return: Enter here the rate of return you want to assume for both funds "x" and "y".

Front End Sales Load: Enter here the percentage of the front-end sales load each fund charges. From 0-8.5% is the allowable range.

Annual Expense Ratio: This information should be accessible from a financial publication that tracks mutual fund performance. Typically from .02% up to 2.5%.

Monthly Payments: This is to enter systematic contribution you anticipate paying to the fund.

Beginning Balance: Enter here what you want to assume you will start your analysis with a lump sum payment into the fund.

Test Period: This is on the right side of the calculator. This determines the test period for all calculations. All blue answers that are calculated for you are for the period you specify here. Looking at the answers provided in blue lettering you can see the account balances through the year specified in the test period cell. You can also see the cumulative fees and expenses, and which fund would have yielded the best "net" return for you. The fund's overall performance is influenced by the funds rate of return, front-end sales charge, and the annual expense ratio. All three of these factors are important, but the bottom line is what is your actual net result.

Pay Cash (For Cars) and Invest the Difference – Version 3.00

All Data Entry cells show up in red.

A lot of people are in the habit of borrowing money every 4 to 5 years to buy a car. What would it be like if they didn't borrow money for these purchases, but rather saved in advance of these purchases and paid cash for the cars? In other words, instead of paying interest to use someone else's money, you find someone to pay you for the use of your money. This calculator looks at just that.

In the **top section** you enter the starting point of an assumed series of 5 car purchases. Enter in this cell (Original Purchase Price) the dollar amount of the first loan, which is assumed to be the amount over and above any trade in. We will look at five purchases to occur in intervals you indicate. In most cases this interval will be 4 or 5 years. We will take the inflation rate you specify and increase each successive purchase accordingly. You will also need to indicate the assumed auto loan interest rate. The top section then outlines for you 5 car purchases, showing the total amount of the loans and the cumulative cost of the monthly payments of the loans.

Where the **top section** is looking at the cost of borrowing the money to buy cars, the **bottom section** is looking at investing money in advance of each purchase to accumulate the purchase price. You will need to enter in the bottom section your assumed investment rate of return. The calculator will then display the monthly payments needed in advance of each purchase to pay cash for each car, while comparing that to the loan payments required as a result of borrowing money for the same car. The bottom section goes a step further, however. You will notice that the advance savings required for each purchase is **less** than the loan payment required for the loan payments in the top section. We will then show that difference being saved in an investment over the test period (at the investment rate you indicated) and you will see the total amount accumulated as a result of diverting this savings. The result of using cash (in the bottom section) for purchases instead of borrowing money, is you bought the same cars over the same time frame but you have also accumulated some cash on the side. It seems that cash based purchases more efficiently use your resources.

Some may want to know how to switch from debt-based purchases to cash based purchases. This will require a few years of sacrifice. If you are in the "borrow for cars cycle", after your current car is paid for, **keep it**. Begin to pay yourself (invest) for your next car until you have the cash to make the next purchase. This may take 4 to 5 years, but this sacrifice will be worth it if you can accumulate the cash on the side that is shown in this calculator, and that will have a positive effect on your retirement nest egg.