

## CALCULATE: What If You Invested That Latte?

Everyone has things they crave. Some people must always have a stick of gum on hand. Others need chapstick. Coffee is a daily ritual for many of us. On their own, all of these are relatively small purchases. However, over the course of a month or a year those expenses will add up to a LOT of money.

*What if, instead of spending small amounts on a daily basis, you saved that money and invested it for retirement? How much money would you have in 30 years?*

### 1) Identify a Daily Expense

First, you need to identify an item you buy on a daily basis that you could forego without pain\*\*. This could be anything you buy almost every day (a drink, food item, online purchase, etc.). In the space below, write the name of the item and its cost (after tax).

- If you don't have an item, use \$3 as an approximate for this daily treat.
- **\*\*NOTE - This should be something you can avoid without pain. Forgoing "lunch" does not count because everyone needs to eat lunch. However, if you always get a smoothie with your lunch, you could choose to forego the smoothie because you can remove it from your daily diet without hurting yourself.**

Item I'm Forgoing	Price
Calculate cost of this item for a full year. Assume you spend this amount 20 days a month for all 12 months.	Cost= Price x 20 x 12  Price = $\$3 * 20 * 12 = \$720$

### 2) Calculate Your Investment Growth

Now, let's see how much money you could earn if you invested that money instead of spending it. To do that, we will use Bankrate.com's [Return on Investment Calculator](#).

To make our calculations work, we need to make a few assumptions:

<b>Years</b>	30	For consistency, we'll keep the number at 30. However, in Part 3 you will have a chance to see the impact if you invest for a longer period of time.
<b>Rate of Return</b>	8%	This assumes you invest in an S&P500 Index Fund, which has historically

		returned at an <i>average rate</i> of 7-9% each year. Remember, the market doesn't get that return every year. It's the average return over 30 years.
<b>Initial Investment</b>	0	Since you are starting this today, you will have no money saved yet to invest.
<b>Additional Investment &amp; Frequency</b>	720	Calculate how much money you would invest PER YEAR and enter it in as your <b>Additional Investment</b> . Then, select "PER YEAR" for <b>Frequency</b> .  (cost of item) * (365 days per year) = Additional Investment for a Year  <i>In Part 3, you'll have a chance to see the growth of investing the money from items you may not buy <u>every</u> day.</i>
<b>Expected Inflation Rate</b>	3%	This is the general rate of <a href="#">inflation</a> from the past.
<b>Tax Rate</b>	0%	This assumes you are investing the money in a tax-deferred retirement account (you will pay tax at the end when you take it out but it will grow TAX FREE for the next 30 years)
<b>Inflation Adjustment</b>	Check the Box	This will account for the fact that your item will not be sold at its current price for the next 30 years. A latte may cost \$3 today but cost \$5 in 10 years.
<b>Show Values After Inflation</b>	DO NOT Check the Box	<i>When the box IS NOT checked, it will show how much money you will have total IN 30 YEARS. However, remember that \$1 will likely be worth <u>far less</u> in 30 years than it is today.</i>

Results - Click "View Reports" to see an in-depth summary of the growth of your investments. In the chart below, enter the results for each section

<b>After 30 years you could have:</b>		
<b>Invested Capital</b> - What you personally deposited	<b>Simple Interest</b> - The sum of the yearly 8% return on your investment	<b>Compound Interest</b> - Sum of the yearly 8% return on the simple interest you've already earned

- A. Looking at the total value of your investment fund after 30 years, what percentage of it came from money that you invested (the actual \$\$ you saved by forgoing your chosen item)? What percentage came from interest (simple and compound combined)?

B. Which of the three sections contributed the largest portion of your investment fund?

C. What conclusions can you draw about the power of interest?

### 3) Change the Assumptions

So as you can see, investing the money spent on those small daily purchases can help you build a pretty enormous investment fund. However, let's examine how your investment growth would change if you changed some specific assumptions.

A. Length of Time - 30 years may not be a reasonable amount of time for you to invest that money. Assuming all other assumptions stay the same, how much money would you have after:

a. 5 years

b. 10 years

c. Until you turn 65

B. Annual Investment - Maybe the item you chose isn't something you buy every day. Assuming all other assumptions stay the same (reset time period to 30 years, return is 8%, 0% tax rate), how much money would you have if you bought your item:

a. Once a week (amount you are saving from above x 52 weeks)

b. Once a month (amount you are saving from above x 12 months)

