Complete Guide

FIRE Calculation Workbook — Your Path to Early Retirement

FIRE planning gets real when you stop guessing and start working from actual spending, current assets, and a believable savings rate. This guide turns the worksheet into a decision system: calculate the annual expenses your future portfolio must fund, convert that number into a practical FIRE target, pressure-test it with conservative and optimistic return assumptions, and track the single metric that matters most over time — FI percentage. Used correctly, this workbook does more than give you a retirement number. It shows which levers move the date forward fastest, where your plan is fragile, and what monthly tracking looks like when early retirement becomes an operating goal instead of a vague dream.

1. Foundation

The core FIRE math is simple on purpose. William Bengen's 1994 safe withdrawal rate research and the 1998 Trinity Study both pointed toward the same starting rule of thumb: a diversified portfolio that can support roughly 4% annual withdrawals needs about 25 times one year's spending. If your annual expenses are $40,000, your starting FIRE number is about $1,000,000. At $60,000, it is $1,500,000. At $100,000, it is $2,500,000. That math gives you the target, but the bigger lever is your savings rate. A household saving 50% of take-home pay can often reach financial independence in roughly 17 years regardless of whether income is $60,000 or $260,000, because the timeline is driven by the gap between spending and saving. Push savings to 70% and the path can shrink to about 8.5 years. The workbook matters because it connects those abstract ideas to your real numbers and to the version of FIRE you are actually pursuing: Lean FIRE under about $40,000 a year, Regular FIRE around $40,000 to $80,000, Fat FIRE above $100,000, Barista FIRE with part-time income covering some expenses, or Coast FIRE where you stop contributing because compounding can finish the job on its own.

FIRE math worksheets built around real annual spending, withdrawal multiples, and scenario ranges let you move from vague goals to concrete targets. Start with the classic 25x rule for a 4% withdrawal rate, but also see what a more conservative 3.5% or 3% rate would require if you want extra margin. A household targeting $48,000 in annual spending needs about $1.2 million at 25x, about $1.37 million at 28.6x, and $1.6 million at 33.3x. That spread is why the workbook asks you to write down assumptions instead of using one magic number. The goal is not to predict the future perfectly; it is to understand the cost of safety, flexibility, and lifestyle choices before you lock in a plan.

Savings-rate analysis is the most practical worksheet in the pack because it shows what actually changes the timeline. A 20% savings rate is respectable, but it usually produces a conventional multi-decade retirement path. Around 30% is strong. Around 50% puts you on a clear FIRE trajectory. Around 70% is aggressive and usually requires either unusually high income, unusually low spending, or both. The useful insight is that every 10-point increase in savings rate tends to cut years off the plan faster than most people expect. Moving from 30% to 40% can be the difference between retiring in your late fifties and your early fifties; moving from 40% to 50% can cut another several years. This is why the workbook tracks both annual spending and annual savings side by side instead of fixating only on portfolio returns.

FIRE-type comparison pages help you choose the right destination before optimizing the route. Lean FIRE works best for people with low fixed costs, geographic flexibility, and a willingness to live on a tighter budget. Regular FIRE fits most households who want a middle-class lifestyle without full-time work. Fat FIRE assumes more travel, more discretionary spending, or higher fixed costs such as private health insurance or expensive housing markets. Barista FIRE assumes part-time income covers some healthcare and day-to-day spending, which can dramatically reduce required portfolio size. Coast FIRE is different: you identify the amount you need invested now so that, with no further contributions, compounding alone reaches your target by traditional retirement age. Seeing all five variants in one workbook prevents a common mistake: solving the wrong version of the problem with great precision.

2. Step-by-Step System

1

Calculate your true annual expenses

Start with spending, not with what you wish you spent. Pull the last 12 months of checking, savings, and credit card statements so you capture seasonal utilities, travel, insurance renewals, gifts, annual subscriptions, and one-off medical bills. Then sort every dollar into three buckets: fixed costs such as housing, insurance premiums, debt minimums, and subscriptions; variable essential costs such as groceries, utilities, transportation, prescriptions, and basic household goods; and variable discretionary costs such as restaurants, hobbies, shopping, entertainment, and travel upgrades. Annualize anything irregular. If car registration is $420 once a year, include the full $420. If you spend $2,400 on travel every summer, do not erase it just because it is not monthly. For early retirement, add a 15% healthcare buffer for the pre-Medicare years unless you already know a more precise marketplace or employer-sponsored transition number. A household spending $52,000 a year today might use $59,800 for planning once that healthcare cushion is added. Multiply the total by 25 to get a first-pass FIRE number. This is why actual spending matters: every $1,000 you mis-measure changes the target by $25,000.

2

Calculate your current net worth

Now build the balance-sheet view. Include every financial account: 401(k), 403(b), traditional IRA, Roth IRA, taxable brokerage, HSA, cash savings, CDs, and any other investment accounts. HSAs count because they are triple-tax advantaged and, if invested rather than used as a checking account, can become powerful retirement assets. If you own real estate, calculate equity conservatively: use an estimated market value times 0.95 to allow for selling costs, then subtract the mortgage balance. Example: if Zillow shows $400,000 and you owe $250,000, conservative equity is about $130,000 ($400,000 x 0.95 = $380,000; $380,000 - $250,000 = $130,000). Include other debts such as student loans, car loans, personal loans, and credit cards. The result is total net worth. Then create a second number: investable net worth, which excludes home equity unless downsizing or selling the property is a deliberate part of your plan. This distinction matters. You can track total net worth for motivation, but your FI percentage should usually be based on liquid, investable assets because those are the dollars that can actually fund retirement spending.

3

Calculate your savings rate

Use the after-tax formula: (take-home pay - spending) ÷ take-home pay. Do not use gross income unless you want a flattering but misleading result. If take-home pay is $96,000 and annual spending is $48,000, savings are $48,000 and the savings rate is 50%. If take-home pay is $84,000 and spending is $25,200, savings are $58,800 and the savings rate is 70%. Those percentages are what drive the timeline. As a rough benchmark, 20% is solid conventional personal finance, 30% is strong, 50% is clear FIRE territory, and 70% is an intentionally aggressive strategy. The relationship is nonlinear: every 10-point increase tends to cut roughly 2 to 4 years from the path, sometimes more depending on your starting assets. This is why a raise that gets entirely absorbed by lifestyle creep is so costly. If your take-home pay rises by $12,000 but spending rises by the same $12,000, the timeline barely changes. If the raise is mostly captured as savings, the entire plan accelerates. Record the current rate, then model what happens at plus 10 points and at the same income with 20% lower spending.

4

Run the compound-growth scenarios

The worksheet's core accumulation formula is FV = PV(1+r)^n + PMT x [((1+r)^n - 1) / r], where PV is your current investable portfolio, PMT is annual contributions, r is annual return, and n is years. A realistic baseline for long-range planning is often 7% real return, which approximates 10% nominal growth minus 3% inflation. Then run conservative and optimistic versions at 5% and 9%. Example: with a current investable portfolio of $300,000 and annual contributions of $40,000, 10 years at 5% produces roughly $992,000, 10 years at 7% produces about $1.14 million, and 10 years at 9% gets to about $1.32 million. That spread is the reason you want scenarios rather than one forecast. For Coast FIRE, reverse the math: Coast number = FIRE number / (1.07^years remaining). If your target portfolio is $1.5 million and you have 20 years until traditional retirement, the amount needed today at 7% real growth is about $388,000. If your invested assets already exceed that number, you may be financially "coasting" even if full FIRE is still years away. Use spreadsheet goal seek, a financial calculator, or iterative trial-and-error to solve for the year your portfolio crosses the target in each scenario.

5

Map the gap and choose your levers

Gap analysis turns the target into an action plan. Gap = FIRE number - current investable net worth. If your FIRE number is $1.5 million and your investable portfolio is $325,000, your gap is $1,175,000. Then attack the gap with the three available levers. Lever one is increasing savings rate, usually by raising income, automating investments, or redirecting raises and bonuses before they become permanent lifestyle upgrades. Lever two is lowering annual expenses. This lever is powerful because each $1 cut from recurring annual spending reduces the FIRE number by $25. Cut annual spending by $4,000 and the target drops by $100,000 immediately. Cut spending from $72,000 to $60,000 and the target drops from $1.8 million to $1.5 million before a single extra dollar is invested. Lever three is improving returns, but treat it as the weakest lever because taking more risk does not guarantee a better outcome. Build a simple comparison table: current savings rate, savings rate plus 10 points, and spending reduced by 20%. In many cases the expense reduction scenario moves the retirement date almost as much as a decade of hoping for better returns, and it does so with less uncertainty.

6

Set up the tracking system

A good FIRE plan is not recalculated once and forgotten. Set a monthly net worth tracking date, an annual FIRE-number recalculation, and a savings-rate dashboard you can update in under 20 minutes. The essential monthly numbers are: take-home income, total spending, annualized savings rate, current investable net worth, total net worth, and FI percentage. FI percentage is the clearest progress metric in the entire workbook: current investable net worth ÷ FIRE number x 100. If your investable assets are $375,000 and your FIRE number is $1.5 million, you are 25% FI. If you reach $900,000 against a $1.5 million target, you are 60% FI. Track that number monthly and you stop asking "Am I doing okay?" and start seeing whether the plan is speeding up or slowing down. Recalculate the FIRE number at least once a year because spending changes, insurance costs change, family size changes, and your preferred version of retirement may change too. The workbook becomes far more useful when it is part of a monthly review ritual instead of a one-time motivational exercise.

3. Key Worksheets & Checklists

Use these as working pages, not as reference reading. Fill them out with numbers from statements, payroll records, and account dashboards on the same day so the baseline is internally consistent. The first card compresses the key math onto one page, the checklist prevents skipped assumptions, and the tracker keeps the goal tied to current reality instead of a stale spreadsheet from six months ago.

FIRE Number & Savings Rate Worksheet

Annual take-home pay	Total after-tax income deposited to checking or otherwise available to spend or save in a normal year.
Annual spending	Actual 12-month spending total from statements, including irregular expenses averaged over the year.
Annual savings	Take-home pay minus annual spending. This is the numerator that funds the plan.
Savings rate	Annual savings ÷ annual take-home pay. Benchmark your result against 20%, 30%, 50%, and 70%.
FIRE spending base	Annual spending plus any early-retirement healthcare buffer, tax adjustment, or other recurring costs you expect to carry.
FIRE multiple	Use 25x for a 4% starting point, then compare 28.6x or 33.3x if you want more margin.
FIRE number	FIRE spending base multiplied by the chosen multiple.
Current investable net worth	Retirement accounts, taxable brokerage, HSA, and cash set aside for investing — usually excluding home equity.
Gap to FI	FIRE number minus current investable net worth. This is the amount your savings and compounding still need to cover.

Execution Checklist

- Pull 12 full months of bank and credit card data before estimating expenses from memory.
- Separate spending into fixed, variable essential, and discretionary categories so you know what is flexible in a bad market.
- Add a healthcare bridge estimate for pre-Medicare years; many households should model $500 to $1,500 per month depending on age, subsidies, and family size.
- Calculate both total net worth and investable net worth so home equity does not accidentally inflate your FI percentage.
- Use take-home pay, not gross pay, when calculating savings rate; employer match can be tracked separately as a bonus variable.
- Run the compound-growth formula at 5%, 7%, and 9% real returns and write down the date each scenario reaches FI.
- Build at least one comparison scenario using a 10-point higher savings rate and one using 20% lower annual spending.
- Set a monthly dashboard date to update net worth, savings rate, and FI percentage, plus an annual date to recalculate the FIRE number.
- Document whether you are targeting Lean FIRE, Regular FIRE, Fat FIRE, Barista FIRE, or Coast FIRE so the rest of the worksheet matches the actual goal.

12-Month Progress Tracker

Month	Net Worth	FI%
January	Record total investable assets at month-end	Current investable net worth ÷ FIRE number x 100
February	Update after contributions, market changes, and debt paydown	Compare against last month, not against an arbitrary ideal
March	Capture bonus season, tax refund investing, or annual expense spikes	Note whether FI% rose from savings, markets, or lower spending
April	Recheck annualized savings rate after Q1 actual spending	Write the updated percentage next to the month-end balance
May	Update investable assets and any new debt balances	Flag if FI% stalls for two straight months
June	Midyear review: rerun scenario dates if income or spending changed	Confirm your target FIRE number still fits the lifestyle you want
July	Track summer travel or irregular spending without hiding it	Keep FI% honest even during expensive months
August	Record contributions and rebalance decisions if applicable	Note whether progress is coming from markets or behavior

Month	Net Worth	FI%
September	Review healthcare assumptions during benefits season	Adjust FIRE number if expected premiums change materially
October	Update all account balances before year-end planning	Check whether the plan is ahead or behind schedule
November	Track holiday spending separately so it does not disappear	Reconfirm annual savings rate using real year-to-date numbers
December	Close the year with a final net worth snapshot and new baseline	Write the starting FI% target for next year

4. Common Mistakes

Using gross income instead of take-home pay

Gross-income savings rates look impressive and create false confidence. FIRE is funded from dollars you can actually save after taxes, insurance, and payroll deductions. If two households both say they save 35% but one is using gross and the other is using take-home pay, they are not describing the same behavior. Always calculate savings rate from after-tax income, then track employer match separately if you want to include it as an additional boost.

Underestimating healthcare costs before Medicare

Healthcare is one of the biggest reasons optimistic early-retirement plans break. Depending on age, household size, subsidy eligibility, and state marketplace options, pre-Medicare coverage can easily run from about $500 to $1,500 per month. If you retire at 45, that gap lasts 20 years. A plan that ignores it can be off by six figures. Model the bridge explicitly and revisit it every year during open enrollment season.

Ignoring sequence-of-returns risk in the first five years

The average return over 30 years matters less than the order of returns right after retirement. A severe downturn early in withdrawal years can damage a portfolio far more than the same downturn later. That is why many early retirees hold a cash or short-bond buffer, use flexible spending rules, or start with a withdrawal rate lower than 4%. The workbook should help you spot this risk, not hide it behind a single average-return assumption.

Counting home equity as if it were a liquid FIRE portfolio

Your home may be part of total net worth, but it usually does not fund groceries, insurance premiums, and healthcare without a separate plan to sell, rent part of it, or borrow against it. Treat home equity as a supporting asset unless monetizing it is central to the strategy. For FIRE calculations, investable assets should do the heavy lifting. That keeps your FI percentage honest and your retirement spending plan realistic.

5. Next Steps

Once your worksheet is complete, pressure-test it with better tools and better inputs. Run your target on cFIREsim.com to see how different retirement start dates and historical market sequences affect sustainability. Track monthly net worth automatically with Empower, formerly Personal Capital, if you want account aggregation without building another spreadsheet. Read the r/financialindependence wiki for practical discussions on Roth conversions, withdrawal sequencing, and tax strategy. For mindset and spending philosophy, revisit *Your Money or Your Life* by Vicki Robin. For deeper withdrawal-rate analysis, work through the Early Retirement Now safe withdrawal rate series. Then come back to this workbook every month, update the numbers, and let the math guide your next move instead of headlines or guesswork.

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