## The Rule of 72

The power of compound interest is an amazing thing: interest earned is added to the principal, so that, from that moment on, the interest that has been added also earns interest. Formulas to calculate the various values in a scenario involving compound interest can certainly be challenging to those for whom mathematics may not be a specialty.

Almost as amazing is the so-called Rule of 72, a simple way to quickly estimate how long it will take your investment to double. The only piece of information you need for this calculation is the annual rate of return. While most investments don't have a fixed rate of return over a long period of time, you can use an average estimate to get a pretty good idea.

### How to Use the Rule of 72

To estimate how long it takes for your money to double, simply divide 72 by the interest rate. The result is how many years it will take for your money to double at that rate. For example, let's assume you can earn a 4% rate of return. How long will it take $1,000 to grow into $2,000?

**72 / 4 percent = 18 years**

In this example, if you invested $1,000 into an account that earned a flat 4% annual rate of return, after 18 years, your investment would be worth around $2,000. To save a little time, here are some interest rates and the corresponding amount of time to double:

| | |
|---|---|
| 1% — 72 years | 7% — 10.3 years |
| 2% — 36 years | 8% — 9 years |
| 3% — 24 years | 9% — 8 years |
| 4% — 18 years | 10% — 7.2 years |
| 5% — 14 years | 11% — 6.5 years |
| 6% — 12 years | 12% — 6 years |

The Rule of 72 can also be used backwards to learn the rate of return required to double your money in a certain number of years. So if your goal was to double your money in ten years, for example, you would divide 72 by ten. The result (7.2%) is the after-tax compound annual rate of return you would have to earn to meet your goal on time.

### Remember, It's Just an Estimate

Keep in mind that this is just a quick estimate. Math rules are certainly no substitute for good planning so use them sparingly. There are very few investments that have a rate of return that stays consistent year after year, which means there aren't many situations where the Rule of 72 can be applied in a truly practical way. Depending on changes in the rate of return over time, what you're invested in, how you invest it, how interest is applied, and possible tax implications, the actual amount of time needed to double your money will vary. Even so, the Rule of 72 can be helpful when you quickly want to compare the rate of growth of two investments.