Compound Interest
RULE OF 72

> **"Money makes money. And the money that money makes, makes money."**
> – Ben Franklin

Compound interest means earning interest on your interest—you can use the

Rule of *72*

to approximate how long it will take for an investment to double at a given interest rate
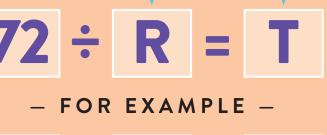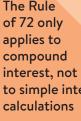
— USEFUL FOR —

COMPARING INVESTMENTS

SAVINGS GOALS

RETIREMENT GOALS

HOW TO 72

Divide the rule number (**72**) by the annual interest rate (**R**) to find out the approximate time (**T**) required for doubling

INTEREST RATE		YEARS TO DOUBLE

$$72 \div R = T$$

— FOR EXAMPLE —

$$72 \div 3 = 24$$

3% ANNUAL INTEREST RATE **24 YEARS TO DOUBLE**

*The Rule of 72 only applies to compound interest, not to simple interest calculations

COMPARING THE MATH

Although scientific calculators and spreadsheet programs have functions to find the accurate doubling time, the Rule of 72 is useful for mental calculations or when only a basic calculator is available

This table illustrates just how close the Rule of 72 is to the actual doubling time

Interest rate	Actual years	Rule of 72
1%	69.66	72.00
2%	35.00	36.00
3%	23.45	24.00
4%	17.67	18.00
5%	14.21	14.40
6%	11.90	12.00
7%	10.24	10.29
8%	9.01	9.00
9%	8.04	8.00
10%	7.27	7.20
11%	6.64	6.55
12%	6.12	6.00

DOUBLING IN ACTION

Here are some interest rates to compare—as you can see, modest increases in rates have a dramatic effect on the doubling time

Years	1.5%	3%	6%	12%
0	$10,000	$10,000	$10,000	$10,000
6				$20,000
12	*In times of historically low interest rates, it's especially important to start investing early*		$20,000	$40,000
18				$80,000
24		$20,000	$40,000	$160,000
30				$320,000
36			$80,000	$640,000
42				$1,280,000
48	$20,000	$40,000	$160,000	$2,560,000

THE TAKEAWAY

Use the Rule of 72 to estimate your potential savings. Time is money when it comes to compound interest—the longer you wait to get started, the less interest you'll earn.

INVESTING CAN BE RISKY

Not all investments are guaranteed— some investments carry the risk of losing money, even when made through a financial advisor or financial institution