

Compound Interest **RULE OF 72**

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*“Money makes money.
And the money that money
makes, makes money.”*

– Ben Franklin

Compound interest =
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



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

HOW TO 72

INTEREST RATE

YEARS TO DOUBLE

$$72 \div R = T$$

The diagram illustrates the Rule of 72 formula. It features three orange boxes with white borders. The first box contains the number '72' in a bold purple font. To its right is a purple division symbol (÷). The second box contains the letter 'R' in a bold purple font. To its right is a purple equals sign (=). The third box contains the letter 'T' in a bold purple font. Above the 'R' box, the text 'INTEREST RATE' is written in black, with a light blue arrow pointing down to the 'R'. Above the 'T' box, the text 'YEARS TO DOUBLE' is written in black, with a light blue arrow pointing down to the 'T'.

HOW TO 72

3% ANNUAL
INTEREST
RATE

24 YEARS
TO DOUBLE

The diagram illustrates the Rule of 72. It features a horizontal sequence of elements: the number 72 in a blue font inside an orange square, followed by a blue division symbol (÷), the number 3 in an orange font inside an orange square, followed by a blue equals sign (=), and the number 24 in an orange font inside an orange square. Above the number 3, the text '3% ANNUAL INTEREST RATE' is centered, with a light blue arrow pointing down to the number 3. Above the number 24, the text '24 YEARS TO DOUBLE' is centered, with a light blue arrow pointing down to the number 24.

$$72 \div 3 = 24$$

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

COMPARING THE MATH

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

COMPARING THE MATH

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

Interest rate	Actual years	Rule of 72
5%	14.21	14.40
6%	11.90	12.00
7%	10.24	10.29
8%	9.01	9.00

COMPARING THE MATH

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

Interest rate	Actual years	Rule of 72
9%	8.04	8.00
10%	7.27	7.20
11%	6.64	6.55
12%	6.12	6.00

Doubling
IN ACTION



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	<i>In times of historically low interest rates, it's especially important to start investing early</i>		\$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



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Sources: *All the Math You'll Ever Need* by Steven Slavin, [BetterExplained.com](https://www.betterexplained.com)

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