## Compound Interest RULE OF 72

**BROUGHT TO YOU BY** 







"Money makes money. And the money that money makes, makes money."

Ben Franklin

### Compound interest = earning interest on your interest

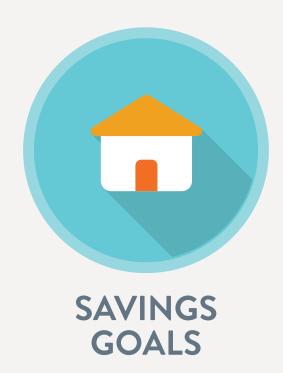
You can use the

# Rule of 72

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

### **USEFUL FOR**







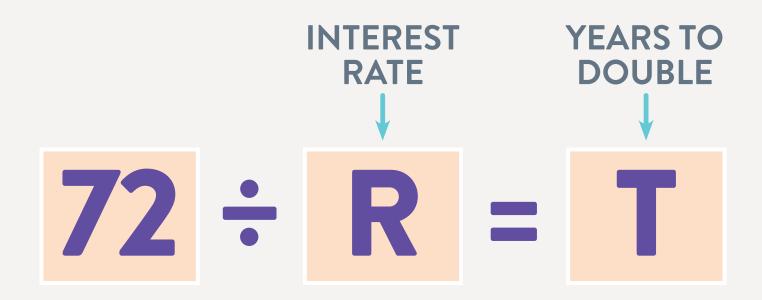
#### **HOW TO 72**

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

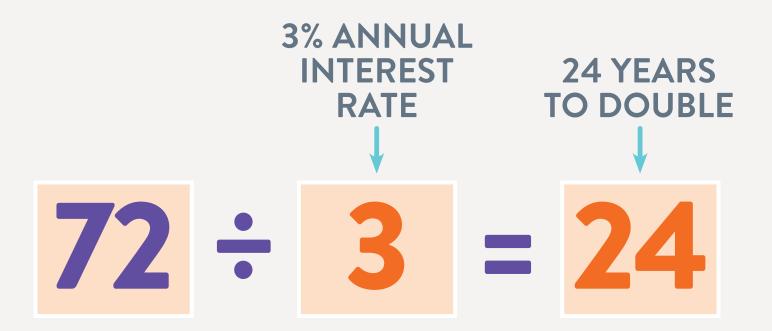


The Rule of 72 only applies to compound interest, not to simple interest calculations

#### **HOW TO 72**



#### **HOW TO 72**





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      |  |

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       |

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     | In times of historically low interest rates, it's especially important to start investing early |          |           | \$20,000    |
| 12    |   |          | \$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



#### **BROUGHT TO YOU BY**



Sources: All the Math You'll Ever Need by Steven Slavin, BetterExplained.com

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