

How do I calculate compound interest in Google Sheets?

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PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=144338>

To calculate compound interest in Google Sheets, you will need to use the built-in financial functions. These functions include "PMT" for calculating periodic payments, "PV" for present value, and "FV" for future value. You will also need to input the interest rate, number of periods, and initial investment amount. Once these values are entered into the appropriate cells, the compound interest can be calculated automatically. This feature is useful for individuals and businesses looking to track and project the growth of their investments or loans.

Calculate Compound Interest in Google Sheets (3 Examples)

We can use the following compound interest formula to find the ending value of some investment after a certain amount of time:

$$A = P(1 + r/n)^{nt}$$

where:

A: Final Amount
P: Initial Principal
r: Annual Interest Rate
n: Number of compounding periods per year
t: Number of years

The following examples show how to use this formula in Google Sheets to calculate the ending value of investments in different scenarios.

Example 1: Compound Interest Formula with Annual Compounding

Suppose we invest \$5,000 into an investment that

compounds at 6% annually.

The following screenshot shows how to use the compound interest formula in Google Sheets to calculate the ending value of this investment after 10 years:

	A	B	C	D
1	Initial Principal (P)	5000		
2	Annual Interest Rate (r)	0.06		
3	Compounding periods per year (n)	1		
4	Number of years (t)	10		
5				
6	Final Amount (A)	8954.24		
7				
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10				
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16				
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18				

This investment will be worth \$8,954.24 after 10 years.

The following screenshot shows how to calculate the ending investment after each year during the 10-year period.

Note that Column F shows the formula we used in each corresponding cell in Column E:

	A	B	C	D	E	F
1	Initial Principal (P)	5000		Year 1	5300	=B1*(1+B2)
2	Annual Interest Rate (r)	0.06		Year 2	5618	=E1*(1+\$B\$2)
3	Compounding periods per year (n)	1		Year 3	5955.08	=E2*(1+\$B\$2)
4	Number of years (t)	10		Year 4	6312.38	=E3*(1+\$B\$2)
5				Year 5	6691.13	=E4*(1+\$B\$2)
6	Final Amount (A)	8954.24		Year 6	7092.60	=E5*(1+\$B\$2)
7				Year 7	7518.15	=E6*(1+\$B\$2)
8				Year 8	7969.24	=E7*(1+\$B\$2)
9				Year 9	8447.39	=E8*(1+\$B\$2)
10				Year 10	8954.24	=E9*(1+\$B\$2)
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Example 2: Compound Interest Formula with Monthly Compounding

Suppose we invest \$1,000 into an investment that compounds at 6% annually and is compounded on a monthly basis (12 times per year).

The following screenshot shows how to use the compound interest formula in Google Sheets to calculate the ending value of this investment after 5 years:

B6 fx $=B1*(1+B2/B3)^(B3*B4)$

	A	B	C	D
1	Initial Principal (P)	1000		
2	Annual Interest Rate (r)	0.06		
3	Compounding periods per year (n)	12		
4	Number of years (t)	5		
5				
6	Final Amount (A)	1348.85		
7				
8				
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16				
17				

Example 3: Compound Interest Formula with Daily Compounding

Suppose we invest \$5,000 into an investment that compounds at 8% annually and is compounded on a daily basis (365 times per year).

The following screenshot shows how to use the compound interest formula in Google Sheets to calculate the ending value of this investment after 15 years:

B6 fx $=B1*(1+B2/B3)^(B3*B4)$

	A	B	C	D
1	Initial Principal (P)	5000		
2	Annual Interest Rate (r)	0.08		
3	Compounding periods per year (n)	365		
4	Number of years (t)	15		
5				
6	Final Amount (A)	16598.40		
7				
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19				

This investment will be worth \$16,598.39 after 15 years.

The following tutorials explain how to perform other common tasks in Google Sheets: