COMPOUND INTEREST AND SAVING · PART 5 OF 8 · AGES 13+

Compound Interest Key Terms

The words and letters you need to read a compound interest question, a savings rate or a loan offer, each with a one-line meaning.

The building blocks

`Principal (P)`	The amount you start with: the money first saved, invested or borrowed. Interest is worked out from it.
`Interest`	Money paid for the use of money. A saver earns it; a borrower is charged it. It is usually quoted as a percentage per year.
`Interest rate (r)`	The percentage of the balance paid as interest in a year, such as an example 5%. In a formula, write it as a decimal: 0.05.
`Period and term (t)`	A period is the time between interest payments, such as a month. The term is the whole length of time, usually in years.
`Compounding frequency (n)`	How many times a year interest is added to the balance: 1 for yearly, 4 for quarterly, 12 for monthly, 365 for daily.
`A = P(1 + r/n)^(nt)`	The final amount A after t years, when interest at a yearly rate r is added n times a year to a principal P.

Rates you will see

`Nominal (gross) rate`	The headline yearly rate before compounding is counted. An example 6% a year added monthly is 0.5% a month.
`APR`	Annual percentage rate: the yearly cost of borrowing on loans and cards. It usually includes some fees, and the exact rules differ by country.
`AER`	Annual equivalent rate, the UK name for a savings rate shown as if interest were paid and compounded once a year, so accounts compare fairly.
`APY`	Annual percentage yield, the US name for the same idea: the yearly interest on savings including compounding. 6% added monthly is 6.17% APY.
`Fixed and variable rates`	A fixed rate stays the same for an agreed time; a variable rate can go up or down. Most textbook examples assume a fixed rate.

What money is really worth

`Inflation`	The rate at which prices rise. At 2% inflation, a basket of shopping that cost 100 a year ago costs 102 today.
`Purchasing power`	How much a sum of money can actually buy. Inflation lowers it over time, even when the number in an account stays the same.
`Real return`	Growth after allowing for inflation. Roughly the interest rate minus inflation; exactly (1 + rate) ÷ (1 + inflation) − 1.

Two names, one idea

AER (used in the UK) and APY (used in the US) both show the yearly rate after compounding. That is why an example 6% a year added monthly appears as 6.17%.

NEXT IN THE SERIES
6. Compound Interest in Everyday Life

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