

Compound Interest

The amount in an account paying **compound interest** is calculated using:

$$\text{Final amount } A = P \left(1 + \frac{r}{100} \right)^n$$

P is **principal** (starting) **amount invested**

r is **interest rate** as a percentage

n is **length of time** (usually number of years)



Example

£300 is invested in an account paying 2% compound interest for 5 years.

Calculate the amount of money in the account at the end of 5 years.

The **principal amount invested** is **£300**

The **interest rate** is **2%**

The **length of time** is **5 years**.

$$A = P \left(1 + \frac{r}{100} \right)^n = 300 \left(1 + \frac{2}{100} \right)^5 = 300 \times 1.02^5 = \text{£}331.22$$

The part of the formula in brackets calculates the percentage multiplier. You may prefer to “skip” this and just write down the percentage multiplier instead.

This final amount is the original £300 plus £31.22 interest.