

Compound Interest

What is compound interest:

When an amount is deposited in a bank account, the bank pay interest on the money.

At the end of the year, the interest is added on.

This new amount including the interest is used for calculating the next year's interest.

Example:

Jamie deposits £4000 in the bank.

The bank pays 4% p.a. compound interest.

How much will Jamie have after 3 years.

After 1 year, Jamie will have £4000 + £160 interest. = £4160.

This amount is used for calculating the next year's interest.

After 2 years, Jamie will have £4160 + £166.40 interest. = £4326.40

After 3 years, Jamie will have £4326.40 + £173.06 interest. = £4499.46

This could of course, be calculated very quickly using multipliers.

e.g. $£4000 \times 1.04^3 = £4499.46$

Examples to try:

1. Paula puts £5000 into a savings account, paying 3% p.a. compound interest.
How much will she have after 15 years?

[Ans: £7789.84]

2. Angus puts £7000 into a savings account, paying 4¼ % p.a. compound interest.
How much will he have after 10 years?

[Ans: £10,613.50]