

Interest Comparisons



There are different formulae for calculating Simple and Compound interest:

Simple Interest

$$A = P(1 + rt)$$

Where: A = the final amount
 P = the original investment
 r = the % rate (in decimal form)
 t = the time period

Compound Interest

$$A = P(1 + r)^n$$

Where: A = the final amount
 P = the original investment
 r = the % rate (in decimal form)
 n = the number of times the interest is applied

Section A Show which type of interest gives the largest final amount.

1. £1000 is invested for 2 years.
Simple interest of 4%.
Compound interest of 4% per annum.

2. £765 is invested for 3 years.
Simple interest of 2.5%.
Compound interest of 2.5% per annum.

3. £2,400 is invested for 5 years.
Simple interest of 1.6%.
Compound interest of 0.9% per annum.

4. £19,000 is invested for 7 years.
Simple interest of 2%.
Compound interest of 1.9% per annum.

Interest Comparisons



Section B

1. Petra wants to invest £32,000 for 3 years in a bank.
She has two accounts to choose from:

Save 4 Life
Compound Interest
2% per annum.

Future Planning
Compound Interest
3% for the first year
1.5% for each following year

Which bank will give Petra the most interest at the end of the 3 years?
You must show how you get your answer.

2. Hamil and Seeta invest some money.
Seeta invests £1,100 in account A.
Hamil invests £1,400 in account B.

Account A
Compound Interest
2.8% per annum.

Account B
Compound Interest
2.3% per annum.

Calculate who will gain the most interest over a 4 year period.
You must show how you get your answer.

3. Nuru is investing some money for 6 years and has two options:

Safe Investments
1.7% simple interest per year

Solid Investments
1.5% compound interest per annum

Which investment account should Nuru choose in order to have the most money after six years?
You must show how you get your answer.