

FINANCIAL

Level 1

Please revise
Percentage

INTEREST is the charge made for using someone else's money. If you deposit money in a bank or in a loan, such as a government loan, you are lending your money and will receive interest for its use. If you borrow money from a bank or financial institution, then you are using someone else's money and you must pay interest for the use of this money.

To **increase/decrease** an amount of money by a certain percent as per example below

Increase by 11% we multiply by 1.11 (100% + 11) Increase by 2% we multiply by 1.02

Decrease by 11% we multiply by 0.89 (100% - 11) Decrease by 2% we multiply by 0.98

Examples

Practise

Increase \$500 by 12½% and decrease the result by 5¼%

112.5% as a decimal = 1.125

Take 5¼% from 100% = 94.75% = 0.9475

$500 \times 1.125 = \$556.25$

Then $556.25 \times 0.9475 = \$527.05$

Decrease \$100 by 5½% and increase the result by 5½% 100×1.055 then $\times 0.945$

1

a) Increase \$550 by 10%

b) Decrease \$345 by 10%

c) Increase \$50 by 5%

d) Decrease \$450 by 22%

e) Increase \$333 by 33⅓%

f) Decrease \$60 by 4½%

SIMPLE INTEREST also known as **FLAT RATE**.

The charge for the amount of money lent is called the **INTEREST**. Or if you have invested money, the reward at the end of a period of time is also called the **INTEREST**. The percentage rate of interest is called the **RATE**. Note this is usually given as a **percentage per annum** (per year).

1

Find the interest charged for borrowing \$6000 from the bank for 3 years at 8% per annum.

$I = Prt$ i.e. the interest = the principal (P) times the rate as a decimal times the time in years

i.e. $I = 6000 \times 0.08 \times 3 = \mathbf{\$1440}$

Note we could have been asked what we owe after 3 years.

$A_t = A_0(1 + rt)$ i.e. The amount owing at time t (A_t) A_0 is the amount owing at the start.

i.e. $A_t = 6000(1 + 0.08 \times 3) = \7440 which of course is $6000 + \mathbf{1440}$

2 a) A builder borrows \$40000 at 8% per annum flat rate (simple interest) to complete his house. How much interest did he have to pay each year?

b) Calculate the simple interest on \$350 at 6% per annum for i) 1 year ii) 4 years.

c) Calculate the interest on \$4500 at $8\frac{1}{4}\%$ for $5\frac{1}{2}$ years.

d) \$5000 was invested in a bank at $5\frac{1}{2}\%$ p.a. Calculate the amount in the bank after 5 years