

# Year 12 Applications - Finance !

## Simple Interest

$$P \times R \times T$$

P = principle (initial investment) r = rate (as a decimal)

T = time (in years)

e.g find the interest earned on an investment of \$100, after 2 years at a rate of 7.5% p.a

$$P = 100 \quad 100 \times 0.075 \times 2 = \$150$$

$$R = 0.075$$

$$T = 2$$

\* remember! simple interest only finds the interest earned and not the full, final amount after the two years. To find the final amount, add simple interest to the principle so...  $100 + 150 = \$250$  (final amount)

## Compound Interest

$$A = P(1 + r/n)^{nt}$$

A = total amount P = principal r = rate (as a decimal)

T = time n = number of compounding periods

e.g Determine the value of an investment of \$1000, after 5 years, at a rate of 5.2% p.a, compounded monthly.

### Using formula

$$A = 1000 \left(1 + \frac{0.052}{12}\right)^{12 \times 5}$$

$$A = \$1296.20$$

↑ activities can do this for you!

\* when giving answers for money remember to give to 2.d.p and put the \$\$\$.

### Using financial

finding FV

$$N = 12 \times 5 = 60$$

$$I = 5.2$$

$$PV = -1000$$

$$PMT = 0$$

$$P/Y = 12$$

$$C/Y = 12 \quad \therefore FV = \$1296$$

↑ (friendly reminder to put what each letter stands for in your notes)