$F = P(1+i)^t$

$P = \dfrac{F}{(1+i)^t}$

3. **Present value**
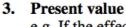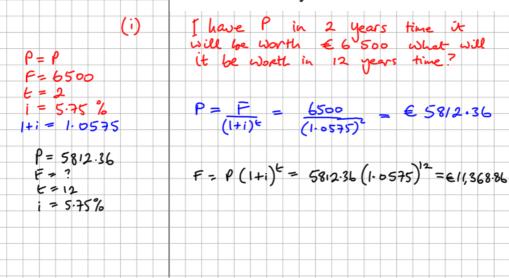
e.g. If the effective annual rate of interest is 5·75%, find

(i) the value in twelve years time of €6500 due in two years time,

(ii) the value one year ago of €4800 due in two and a half years time,

(iii) the value in two years time of €6000 due in sixty six months time.

(i)

$P = P$
$F = 6500$
$t = 2$
$i = 5.75\%$
$1+i = 1.0575$

$P = 5812.36$
$F = ?$
$t = 12$
$i = 5.75\%$

I have P in 2 years time it will be worth €6'500 what will it be worth in 12 years time?

$P = \dfrac{F}{(1+i)^t} = \dfrac{6500}{(1.0575)^2} = €5812.36$

$F = P(1+i)^t = 5812.36(1.0575)^{12} = €11,368.86$

$F = P(1+i)^t$

$P = \dfrac{F}{(1+i)^t}$

3. **Present value**

e.g. If the effective annual rate of interest is 5·75%, find

(i) the value in twelve years time of €6500 due in two years time,

(ii) the value one year ago of €4800 due in two and a half years time,

(iii) the value in two years time of €6000 due in sixty six months time.

$\boxed{MER = \sqrt[12]{1+i} - 1}$

$t = 3\frac{1}{2}$ years $= 12(3.5)$ mo.
$\quad = 42$ months
$F = €4800$
$MER = \sqrt[12]{1.0575} - 1 = .00467$
$P = ?$

(ii) P. Present value of €4800 in $3\frac{1}{2}$ years time?

$P = \dfrac{4800}{(1.00467)^{42}} = €3946.91$