Formulae for calculation of interest, loan repayments and deposits

Formula for calculation of compounded interest on deposit

\[ D_n = D_0 (1+r)^n \] at fixed interest rate

\[ D_n = D_0 (1+r_1)(1+r_2)(1+r_3)\ldots(1+r_n) \] at floating interest rate

Formula for calculation of standard loan repayments of self amortising loan

\[ \frac{L}{n} + L.r_1 \quad \frac{L}{n} + ((L-(L.1)/n).r_2 \quad \frac{L}{n} + ((L-(L.2)/n).r_3 \quad \frac{L}{n} + \ldots + ((L-(L.(q-1))/n).r_q \]

(where \( L/n \) is repayment of the principal on equal portions and \( Lq.r_q \) is repayment of the interest for the period)

Formula for calculation of interest rate payments on self amortising loan (equal repayments of principal)

\[ \frac{L}{n} \cdot r_1 \quad (L-L/n).r_2 \quad (L-L/2/n).r_3 \quad \ldots \quad (L-L.(q-1)/n).r_q \]

Total compounded interest payable over the life of the loan = \( ((L.r.(n+1))/2 \)

Formula for repayment of a loan on equal repayments

\[ \text{Repayment per period} = L_0(1+r)^n/((1+r)^n-1) \]