

RATE

Updated: 31 Mar 2016

Use **RATE** to return the periodic rate of an annuity.

Syntax

```
Public Shared Function RATE(  
    ByVal Nper As Double,  
    ByVal Pmt As Double,  
    ByVal PV As Double,  
    ByVal FV As Double,  
    ByVal Pay_type As Integer,  
    ByVal Guess As Double,)
```

Arguments

Nper

the number of periods in the annuity. *Nper* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Pmt

the periodic annuity payment. *Pmt* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

PV

the present value of the periodic annuity payments and future value. *PV* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

FV

the remaining cash balance at the end of the annuity. *FV* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Pay_type

the number {0, 1} specifying an ordinary annuity (0) or an annuity-immediate (1). *Pay_type* is an expression that returns **Integer**, or of a type that can be implicitly converted to **Integer**.

Guess

the initial guess for the rate. *Guess* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Return Type

Double

Remarks

- **RATE** finds the best value that approximates the following condition: $ABS(Pmt - PMT(RATE(Nper,Pmt,PV,FV,Pay_type,Guess),Nper,PV,FV,Pay_Type))) = 0$

See Also

- **CUMODDFIPMT** - Cumulative interest on the periodic annuity payments between a start period and an end period
- **CUMODDFPPMT** - Cumulative principal on the periodic annuity payments between a start period and an end period
- **FV** - Future Value
- **FVGA** - Future value of a growing annuity
- **FVSCHEDULE** - Future value based on compound rates
- **NOMINAL** - Annual nominal interest rate
- **NPER** - Number of periods
- **NPERGA** - Number of periods of a growing annuity
- **ODDFIPMT** - Interest portion of a periodic payment for an annuity with an odd first period
- **ODDFPMT** - Periodic payment for an annuity with an odd first period
- **ODDFPMTSCHED** - Amortization schedule for an annuity with odd first period
- **ODDFPPMT** - Principal portion of a periodic payment for an annuity with an odd first period
- **ODDFPV** - Present value of an annuity with an odd first period
- **ODDFRATE** - Periodic interest rate for an annuity where the first period is longer or shorter than the other periods
- **ODDPV** - Present value of an annuity with an odd first period
- **PMTGA** - Initial payment of a growing annuity
- **PV** - Present value
- **PVGA** - Present value of a growing annuity