

PMTGA

Updated: 31 Mar 2016

Use **PMTGA** to calculate the initial payment for a growing annuity, given the future value.

Syntax

```
Public Shared Function PMTGA(  
    ByVal FV As Double,  
    ByVal Pgr As Double,  
    ByVal Nper As Integer,  
    ByVal Rate As Double,  
    ByVal Pay_type As Integer,)
```

Arguments

FV

the future value of the annuity. *FV* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Pgr

the periodic growth rate of the annuity. This is the percentage amount, expressed as a decimal, by which the annuity will increase in each period. *Pgr* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Nper

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

Rate

the percentage rate of return, expressed as a decimal, that you expect the annuity to earn over the number of periods. The annuity payments are compounded using this value. *Rate* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Pay_type

the number 0 or 1 and indicates when payments are due. *Pay_type* is an expression that returns a **Integer**, or of a type that can be implicitly converted to **Integer**.

Set <i>Pay_type</i> equal to	If payments are due
0	At the end of a period
1	At the beginning of a period

Return Type

Double

Remarks

- The **PMTGA** value will have the same sign as *FV*.
- If the *Pay_type* is not equal to zero, it is assumed to be 1.
- To calculate the Future value of a growing annuity, use the **FVGA** function.

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
- **PV** - Present value
- **PVGA** - Present value of a growing annuity
- **RATE** - Interest rate of an annuity