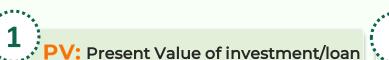


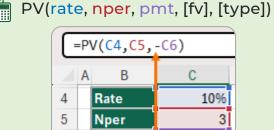
13 EXCEL FUNCTIONS FOR FINANCE PROS





\$2,000.00

\$4,973.70



PMT

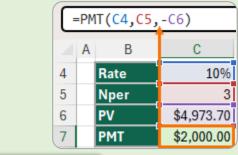
Note:

- 1. PMT should be negative because it represents an outflow of cash
- 2. FV, optional argument used for securities with a maturity value
- 3. Type = 1 assumes payments are made at the beginning of the period

Download in hi-res: https://bit.ly/finance-functions

PMT: Annual payments of an investment/loan

PMT(rate, nper, pv, [fv], [type])



Note:

Description

Loan Amount

Payments per Year

Total interest for Year 1

Principal paid in Year 1

Interest portion of the 1st payment

Principal portion of the 1st payment

IPMT(rate, per, nper, pv, [fv], [type])

Total Payements

Description

principal paid

Note:

the weekend

days in your

country, for

Fri – Sat weekend,

Similar to

NETWORKDAY.

weekend, here

INTL, you can

choose your

5 implies a

Wed-Thurs

weekend

e.g., 7 implies

instead of the

traditional Sat

Sun weekend.

You can choose

of Years

Rate

- 1. PV should be negative because the loan amount is an outflow of cash
- 2. FV, the optional argument, is used for securities with a maturity value
- 3. Type = 1 assumes payments are made at the beginning of the period

Loan Amortization Functions:

Value

5%

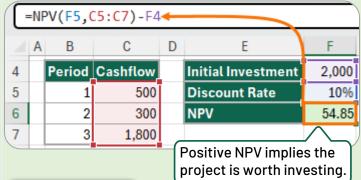
12

\$10,000

Amount \$

Calculate various loan amortization metrics

NPV: Net Present Value of Cashflows m NPV(rate, value1, [value2],...



Note:

- Sign is used before

459.00 = CUMIPMT(C5/C8,C7*C8,C6,1,12,0)

1,805.55 =-CUMPRINC(C5/C8,C7*C8,C6,1,12,0)

Formula

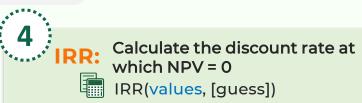
the formula to get a

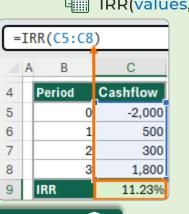
positive value.

41.67 =-IPMT(C5/C8,1,C7*C8,C6)

147.05 =-PPMT(C5/C8,1,C7*C8,C6)

1. Use NPV when CFs vary each period, unlike equal payments in the PV function 2. Initial investment at time 0 is reduced separately, as it doesn't require discounting





Note: 1. IRR requires the initial investment as a negative value at time 0 2. Discount rate higher

than the IRR will result

in negative NPV

=NPV(C9,C6;C8)+C5 В С Cashflow Period -2,000 500 300 1,800 11.23% Verify NPV = 0 using IRR as the discount rate.

Valuation

Date

Essentials

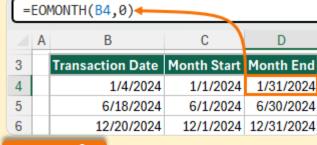
Amortization

Pro Tips

1. For irregular CF dates, use the XNPV & XIRR functions, instead.

2. For varying financing and reinvesting rates, use MIRR function, instead.

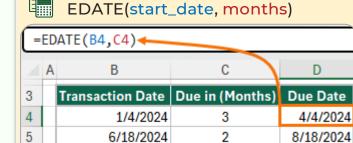
Return the last EOMONTH: day of the month EOMONTH(start_date, months)



Note:

- 1. Months argument accepts both positive & negative values
- 2. Positive values result in next month, & negative values in previous month
- 3. To calculate start of the month use the formula EOMONTH(start_date, -1) + 1

Return a date offset by a number of months



NETWORKDAYS.INTL:

=NETWORKDAYS.INTL(B5,C5,7,\$F\$4:\$F\$6)

Start Date | End Date | Working Days

1/1/2025

As 1/1/2025 is a holiday, the

working days didn't increase

/WORKDAY.INTL

=WORKDAY.INTL(B5,C5,5,\$F\$4:\$F\$6)

Start Date Business Days

12/5/2024

1/1/2025

12/31/2024

12/5/2024 12/31/2024

12/5/2024

5

Months argument accepts both positive & negative values

12/20/2024

Pro Tip

Calculate workdays

between two dates

4

5

6

7

8

10

11

12

13

15

5/20/2025

Holidays

12/25/2024

12/31/2024

1/1/2025

Calculate due date, given the start

date & business days to skip

Holidays

12/25/2024

12/31/2024

1/1/2025

NETWORKDAYS.INTL(start_date, end_date, [weekend], [holidays])

17

WORKDAY.INTL(start_date, end_date, [weekend], [holidays])

Due Date

10

12/10/2024

1/14/2025

1/5/2025

Both NETWORKDAY.INTL & WORKDAY.INTL accept a binary 7-digit '0101000' string, where 0 is working and 1 is not working.

CUMIPMT(rate, nper, pv, start_period, end_period, type)

Note: simply replace CUMIPMT with CUMPRINC to get cumulative

Note: simply replace IPMT with PPMT to get the principal portion

Use them to define custom week structures – such as 0101000 implies non-consecutive non-working days on Tuesdays & Thursdays.

You can also have more than 2 non working days using this method.

Note:

1. rate = Annual rate/Payments per Year.

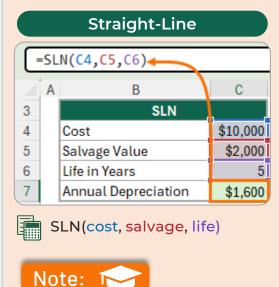
2. nper = # Years * # Payments per Year.

3. Update the start_period to 13 & end_period to 24 to get cumulative values for Year 2 & so on.

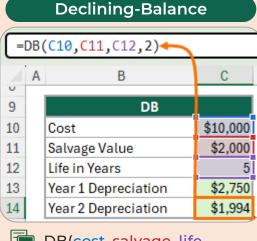
4. 'per' argument in IPMT & PPMT is the period # for which you want to find the interest or principal amount.

Depreciation Functions:

Calculate Straight Line and Fixed-Declining Balance Depreciation



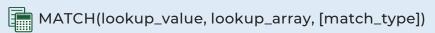
Other depreciation functions available include: DDB, VDB & AMORLINC.

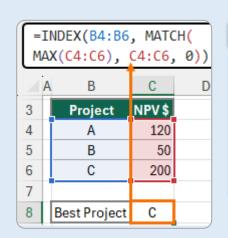


DB(cost, salvage, life, period, [month])

INDEX + MATCH: Powerful combination for flexible lookups

INDEX(array, row_num, [column_num])





Step by Step ~

Problem: Lookup the project with highest NPV

1. MAX of (C4:C6) calculates the maximum NPV

2. MATCH locates the position of the highest NPV

3. <u>INDEX</u> then returns the project name at that position.

13 XLOOKUP: Flexible, bi-directional lookup

==XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])



		XLOOKUP(MA)	6),C4:C6	:C6,B4:B6)	
4		A B	С	D	Е
	3	Project	NPV\$		
	4	Α	120		
	5	В	50		
	6	С	200		
	7				
	8	Best Project	С		

Note:

1. Achieve the same result as INDEX+MATCH, but with a much simpler formula

2. Can lookup in all directions, unlike **VLOOKUP**

3. Only available for Excel 365 & 2021+

10 IFS: Perform multiple logical tests

IFS(logical_test1, value_if_true1, [logical_test2, value_if_true2],...)

=IFS(C4>=100,"High", C4>=50,"Average",

C4>=0,"Low", TRUE, "Unprofitable")										
A	А В	С	D	E	F					
3	Project	NPV\$	Profitability							
4	Α	120	High							
5	В	60	Average							
6	С	10	Low							
7	D	(20)	Unprofitable							

Note: 📂

- 1. You can also use the **SWITCH** function to achieve the same result
- 2. IFS is only available for Excel 2019 onward 3. For earlier versions, you could use Nested **IFs** or **INDEX+MATCH**





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