

Module 6

## CREATE NETPRESENTVALUE FORMULA

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**Here we create the financial formula NETPRESENTVALUE**

**You need to work with the MyVariable library for this  
formula**

**For this formula we need 5 My Variables, which we  
define ourselves**

## We create the formulas: - NETPRESENTVALUE

With this formula we define the MyVariables beforehand

1. Investment **Acquisitionexpense**
2. Number of Period **aper**
3. Interest rate per year **Ir1**
4. Period yield **payout**
5. Percent rate **percent**

**Block 1:**  
Formula name

NAME	<b>NETPRESENTVALUE</b>	DESCRIPTION	Netpresentvalue
CATEGORY	Banking and Finance	SUBCATEGORY	Interest calculation

**Block 2:**  
Editor + calculator

```

Totalinvestment= Acquisitionexpense
FOR (i, 1, aper) {discountfactor (i) = 1 / (1 + Ir1) ** i
Netpresentvalue(i) = Payout * discountfactor
Earningsvalue(i) = Netpresentvalue(i) + Earningsvalue(i-1) + Netpresentvalue (-2)}
Profitloss = Earningsvalue(aper) - Acquisitionexpense
Discounted_Yield = Earningsvalue
Totalprofit = Profitloss
Profit = Totalprofit / Discounted_Yield * percent
ReceivedPayout = aper * Payout
SHOW (Totalinvestment;Discounted_Yield;Totalprofit;Profit;ReceivedPayout)
    
```

**Block 3:**  
Variables and  
Right  
Results

Show Errors	<input checked="" type="checkbox"/>	Significant numbers	2	
Acquisitionexpense	Investment for project	225000	Totalinvestment	225 000.00
aper	Number of Period	24	Discounted_Yield	309 363.52
Ir1	Interest rate per year	0.0125	Totalprofit	84 363.52
Payout	Period yield	15000	Profit	27 %
percent	Percent rate	100 %	ReceivedPayout	360 000.00

The MyVariables are activated via the button

The MyVariables are set using the button in the editor generated

**Create MyVariable**

## Variables used by NETPRESENTVALUE

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Name	Description	Format	Unit	By default	Category	Subcategory
<b>percent</b>	Percent rate	numeric	%	100	Banking and Finance	all Subcategories
<b>Payout</b>	Period yield	numeric		15000	Banking and Finance	Interest calculation
<b>Ir1</b>	Interest rate per year	numeric		0.0125	Banking and Finance	all Subcategories
<b>aper</b>	Number of Period	numeric		24	Banking and Finance	all Subcategories
<b>Acquisitionexpense</b>	Investment for project	numeric		225000	Banking and Finance	all Subcategories

### Variable: Acquisitionexpense

**Data**

Category: Banking and Finance

Name: Enter variable name manually  
Acquisitionexpense

Format: numeric

Code: No

Default value: 225000

Constant value: No

Subcategory: all Subcategories

### Variable: aper

Description: Information (Optional)

**Data**

Category: Banking and Finance

Name: Enter variable name manually  
aper

Format: numeric

Code: No

Default value: 24

Constant value: No

Subcategory: all Subcategories

Description: Number of Period

Information (Optional)

Tables:

Unit definition: This variable has no unit

### Variable: Ir1

**Data**

Category: Banking and Finance

Name: Enter variable name manually  
Ir1

Format: numeric

Code: No

Default value: 0.0125

Constant value: No

Subcategory: all Su

### Variable: Payout

Description: Information (Optional)

**Data**

Category: Banking and Finance

Name: Enter variable name manually

Subcategory: Interest calculation

Description: Period yield

Information (Optional)

Tables:

Unit definition: This variable has no unit

### Variable: percent

**Data**

Category: Banking and Finance

Name: Enter variable name manually  
percent

Format: numeric

Code: No

Default value: 100

Constant value: No

Subcategory: all Subcategories

Description: Percent rate

Information (Optional)

Tables:

Unit definition: Enter unit manually

Unit: %

Dimension: One

Quantity: Percent

## NETPRESENTVALUE formula

**Block 1:** Definition of the formula

Press **My Formulas / Create**: an empty editor appears.

Enter Name: **NETPRESENTVALUE** and Description: **Netpresentvalue**

**Category: Banking and Finance** and **Subcategory: Interest calculation**  
enter.

With the input of Category and Subcategory we have defined which 5 variables we have to work with.

**Block 2:** After the 5 MyVariables (see page 3) have been defined, the following formula can be entered in the editor. Good luck!

Totalinvestment= Acquisitionexpense

FOR (i, 1, aper) {discountfactor (i) = 1 / (1 + Ir1) \*\* i

Netpresentvalue(i) = Payout \* discountfactor

Earningsvalue(i) = Netpresentvalue(i) + Earningsvalue(i-1) + Netpresentvalue (-2)}

Profitloss = Earningsvalue(aper) - Acquisitionexpense

Discounted Yield = Earningsvalue

Totalprofit = Profitloss

Profit = Totalprofit / Discounted Yield \* percent

ReceivedPayout = aper \* Payout

SHOW (Totalinvestment;Discounted Yield;Totalprofit;Profit;ReceivedPayout)

Taste **Calculate** drücken

**Block 3: Show Variables (left) and results (right):**

Show Errors	<input checked="" type="checkbox"/>	Significant numbers	<input type="text" value="2"/>	
Acquisitionexpense	Investment for project	<input type="text" value="225000"/>	Totalinvestment	<b>225 000.00</b>
aper	Number of Period	<input type="text" value="24"/>	Discounted_Yield	<b>309 363.52</b>
Ir1	Interest rate per year	<input type="text" value="0.0125"/>	Totalprofit	<b>84 363.52</b>
Payout	Period yield	<input type="text" value="15000"/>	Profit	<b>27</b> <input style="width: 20px; border: none; border-bottom: 1px solid black; text-align: right; font-size: 0.8em; vertical-align: middle;" type="text" value="%"/>
percent	Percent rate	<input type="text" value="100"/> <input style="width: 20px; border: none; border-bottom: 1px solid black; text-align: right; font-size: 0.8em; vertical-align: middle;" type="text" value="%"/>	ReceivedPayout	<b>360 000.00</b>

**Calculate**

**Save**

**Back**

**Graph**

**Create MyVariable**