

Adaptive Planning

User Guide Formulas

Copyright 2004, 2006 Adaptive Planning, Inc. All Rights Reserved. This work contains trade secrets and confidential material of Adaptive Planning, Inc., and its use or disclosure in whole or in part without the express written permission of Adaptive Planning, Inc., is prohibited.

Last Updated March, 2009

Adaptive Planning, Inc.
User Guide: Formulas

1.	OVERVIEW	1
2.	ALL USERS: CREATING FORMULAS	1
	ABOUT FORMULAS	1
	<i>f(x)?</i>	2
	<i>Referencing Other Cells</i>	3
	In View by Plan Sheet Mode	3
	<i>Formula Errors</i>	4
	THE FORMULA ASSISTANT	4
	<i>Formula Terms (Account Type)</i>	5
	<i>Operators and Functions</i>	7
	If vs IFF	8
	DIV vs DIVF	9
	Numeric Functions	9
	<i>Term Modifiers</i>	10
	Month	10
	Further Time Range References	10
	Date Functions	10
	Plan	12
	Split	12
	Dimension	13
	<i>Finalizing the Formula</i>	14
3.	ADMINISTRATORS: CREATING FORMULAS	15
	USING THE FORMULAS TAB	15
	<i>Formulas Tab Functionality Overview</i>	16
	<i>Formula Functionality Details</i>	16
	Account List	16
	Plans List/Grid Format	16
	Modify Formulas Area	17
	User Edits from Sheets	18
	<i>Related Account Administration</i>	20
	Set Default Values and Formulas	20
	Calculate Actuals	20
	FORMULA ACCESS TO MODELED SHEET DATA	21
	<i>Universally-Available Modeled Sheet Data</i>	21
	Referencing Modeled Sheet Rows	21
	<i>Locally-Available Modeled Sheet Data</i>	22
	PLAN ADMINISTRATION RELATED TO FORMULAS	23
	VERSION ADMINISTRATION RELATED TO FORMULAS	23

Adaptive Planning, Inc.

User Guide: Formulas

1. Overview

Formulas can be written in many places throughout the Adaptive Planning application, by both budget managers and administrators.

All users can create formulas in cells on sheets, in accounts that have not been designated read-only. This includes the Locals sheet (locals are assumptions created by end users.)

Administrators can also create formulas in accounts on the Formulas Tab; when building modeled sheets; and when creating metric accounts.

This user guide is intended to be helpful to both end users and administrators in their formula-writing efforts.

2. All Users: Creating Formulas

About Formulas

Formulas allow the calculation of numeric values in cells. If a cell has a colored background, it cannot be edited, either because the account is read-only, as shown here:

Operational Expenses			
Payroll			
Salary	62,083	62,083	62,083
Benefits	9,312	9,312	9,312
Total	71,396	71,396	71,396

Or because the cell is in a row that is a calculated total, as shown here:

Operational Expenses			
Payroll			
Salary	62,083	62,083	62,083
Benefits	9,312	9,312	9,312
Total	71,396	71,396	71,396

If a cell has a white background, most of the time a value or a formula can be entered here.

Utilities			
Telephone			
Internet			
Other Utils			
Total			
Other Expenses			
Total	71,396	71,396	71,396

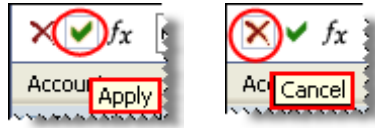
The exception is the Dimension column, where a cell may have a white background, but actually references a drop-down menu.

Accounts	Project
Operational Expenses	Any
Payroll	Any
Salary	Any
Benefits	Any
Total	
Utilities	Any
Telephone	
Cell Phone	Any
Total	Any
Internet	Project A
Other Utils	Project B
Total	Project C

Adaptive Planning, Inc. User Guide: Formulas

Formulas allow the calculation of numeric values in cells. Formulas cannot be used in cells containing dates, text, and list boxes.

When creating formulas, click on the Apply (green checkmark) icon to apply changes. Formulas can be deleted by backspacing over them or replacing them with zeros, then clicking on Apply. Or, use the Cancel icon.

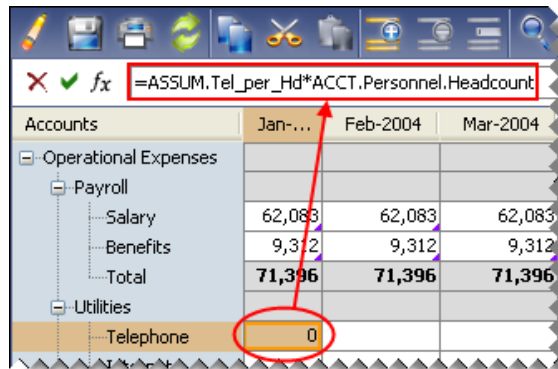


f(x)?

After a formula is entered, the symbol **f(x)?** is displayed. This means that the value resulting from the formula has not yet been calculated (i.e., the formula has not yet been evaluated.) Save the sheet, and then the formula will display its evaluated result.

Utilities	
Telephone	f(x)?
Internet	
Other Utils	
Total	0
Other Expenses	

A formula can be entered into the cell edit box at the top of the page (after selecting the cell):



A formula can also be entered directly into the selected cell:

Accounts	Jan-2004
Operational Expenses	
Payroll	
Salary	
Benefits	
Total	
Utilities	
Telephone	=ASSUM.Tel_per_Hd*ACCT.Personnel.Headcount
Internet	
Other Utils	

Adaptive Planning, Inc.

User Guide: Formulas

Referencing Other Cells

A formula typed into a cell can reference other cells on the sheet. **Start by typing = into a cell.** The cell edit box now contains the equals sign, and nothing else.



Now click on a different cell on the sheet in order to capture it in the formula. Notice that the cell edit box now contains the code of the referenced account, as well as any other pertinent information about the selected cell.



The formula can be further modified by typing in simple operators such as +, -, *, and /. Click on another cell in the sheet. Repeat as often as desired. Each time a new cell reference is added to the formula, separated by operators, a new color is assigned to that part of the formula.



Hit Enter, or click on the green check mark when the formula is complete. Alternatively, hit the Escape or Cancel button to cancel the formula.

This is quick way to create a simple formula to sum a few cells on the sheet.

- **Note:** If a formula is created this way, and completed, a user cannot return to and modify the formula in this same fashion. The formula can be subsequently modified by typing changes directly into the cell edit bar, or by using the Formula Assistant, as described below.

IN VIEW BY PLAN SHEET MODE

This method of writing formulas to reference other cells may behave differently if a sheet is in View by Plan mode. This is because the different rows of the sheet represent different plans, not different accounts.

Depending on the public setting in an account, not all cells on the sheet are necessarily valid for use in a formula. If an account is set as Public, then all cells are valid as terms in a formula. However, if an account is set as private, or public at corporate plan only, cells in that account are not available to be included in formula terms. If a user attempts to reference these cells in a formula, a message is displayed, saying, "This cell cannot be used in a formula in the current formula, because it is unreachable due to data privacy."

- For more information on sheets in View by Plan mode, please see the User Guide for Budget Managers, in the section called Entering Data on Sheets/View by Plan Mode.
- For more information on the public and private settings of accounts, please see the User Guide for Administrators.

Adaptive Planning, Inc. User Guide: Formulas

Formula Errors

If a formula is written in improper syntax, for example, using a circular reference, the cell being edited will display a red box, and will retain the f(x)? symbol, even after the sheet is saved, as shown here:

Utilities		
Telephone	f(x)?	
Internet		
Other Utils		
Total	0	
Other Expenses		
Total	71,396	

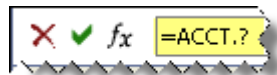
Hovering over the red cell will display a tip with an explanation, e.g.

This formula contains an invalid account.

or:

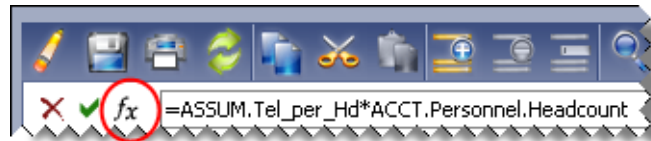
This formula contains a circular reference. For example, it may refer to this account's parent account.

The formula in the cell edit bar will contain question marks wherever an invalid account is referenced:



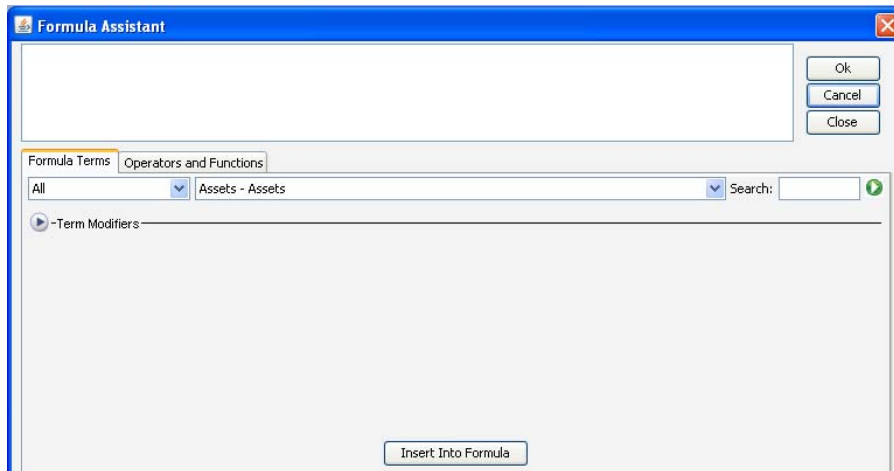
The Formula Assistant

Anywhere that formulas can be written, the Formula Assistant is available. It can be found next to the cell edit bar:



The Formula Assistant helps users construct syntactically correct formulas. It is used for inserting valid accounts, assumptions, qualifiers, and functions into a formula.

After selecting the cell to contain the formula, click on the Formula Assistant icon. This will open the Formula Assistant dialogue box.



Adaptive Planning, Inc. User Guide: Formulas

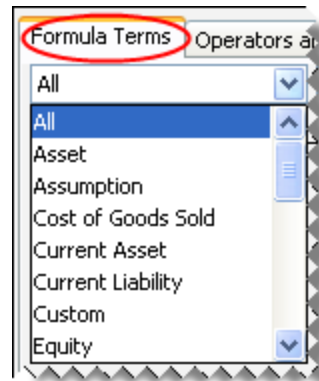
The components of the Formula Assistant are discussed below.

Formula Terms (Account Type)

The first step in creating a formula is to choose a Formula Term, or account type. The drop-down menu displays all of the different account types in the system.

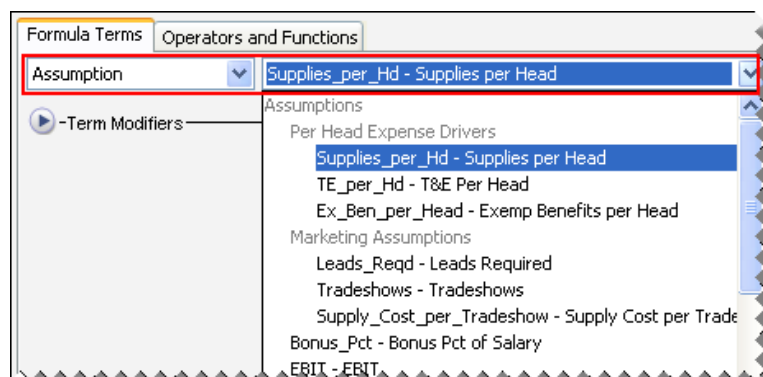
The account types are listed in alphabetical order:

- Asset
- Assumption
- Cost of Goods Sold
- Current Asset
- Current Liability
- Custom
- Equity
- Exchange Rate
- Expense
- Fixed Asset
- Income
- Liability
- Liability and Equity
- Local
- Long Term Asset
- Long Term Liability
- Metric
- Modeled
- Net Income
- Non-Operating Expense
- Non-Operating Income
- Other Asset
- YTD Earnings (Loss)



All account types are shown here, but budget managers will probably be interested primarily in assumptions, expenses, income, locals, modeled, and perhaps custom and metric accounts.

Choose an account type, e.g. Assumption. The Account drop-down menu will display all accounts of that type.

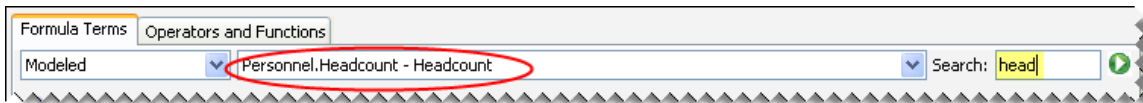


Adaptive Planning, Inc. User Guide: Formulas

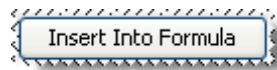
All users will see all accounts, except for Locals created by other users, and certain accounts specific to administration of modeled sheets.

- **Note:** Users will never see data to which they have not been given access. Just because an account is shown in this menu does not mean that the user will be able to see data in that account. If a formula includes an account to which the user has no access, the formula will return a value of zero.

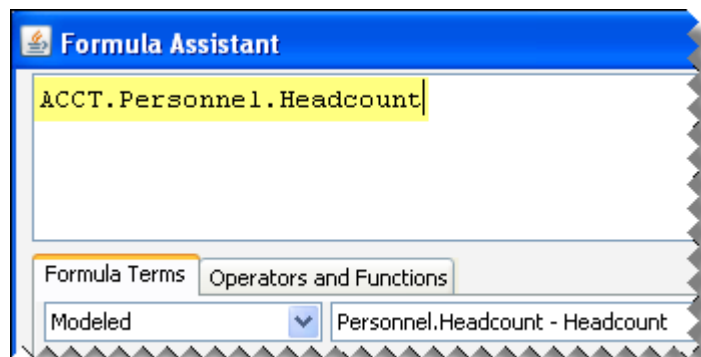
The **Search** box can be used by entering some or all of the account name or code.



Once the account has been located, click on the Insert into Formula button.



This account can be seen in the formula at the top of the Formula Assistant.



- **Note:** When preparing a formula with multiple pieces, be sure that the cursor is pointing to the proper place in the formula in the before clicking on Insert into Formula.

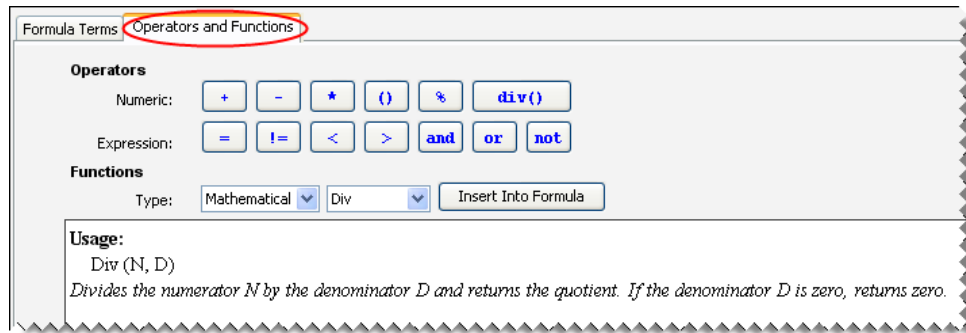


Notice that whenever an account is included in a formula, it must be in the format of ACCT.code, or ASSUM.code. Using the Formula Assistant to insert accounts means that the user does not have to try to remember this syntax.

Adaptive Planning, Inc. User Guide: Formulas

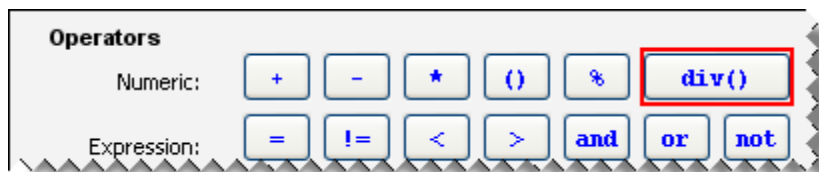
Operators and Functions

Operators and Functions can be accessed by a tab in the bottom half of the Formula Assistant.



Operators can be selected by clicking on them, or by typing them into the cell edit bar. The most common operators include +, -, *, /.

When including the **divide** operator, it is acceptable to type / into the formula. However, it is recommended that the div button be used instead, to prevent a division-by-zero error.



The resulting syntax, Div (N,D), means that within the parentheses, the numerator should be first, followed by a comma, then the denominator, e.g.

=Div(400,2)

This way, if the denominator is zero, the evaluated result of the formula will be zero. If the formula were written using the / symbol instead, and the denominator is zero, the evaluated result of the formula will be an error.

Other operators include:

pow	Power (number,power)	Returns the result of a number raised to a power
round	Round(number)	Rounds a number
if	IF(logical_test,value_if_true,value_if_false)	Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE
max	greatest(number1,number2...)	Returns the largest value in a set of values. Ignores logical values and text.
min	least(number1,number2...)	Returns the smallest value in a set of values. Ignores logical values and text.
log	ln(number)	Returns the logarithm of a number
trunc	trunc(number)	Truncates a number to an integer

Adaptive Planning, Inc. User Guide: Formulas

There are other operators, which can be manually inserted into the formula, by typing them into the cell edit bar. They are:

1. The **modulo** operation finds the remainder of division of one number by another. In a formula, put the % symbol in between the two values (or accounts.)

E.g. 7%3 would return the value of 1, and 9%3 would return the value of 0.

2. Inside the IF() function, **comparison operators** can be used. These are:

< less than
> greater than
= equal to
!= or <> not equal to

These can be combined, e.g. <= means less than or equal to.

3. Inside the IF() function, **boolean operators** can be used. These are

AND Logical and
NOT Logical negation
OR Logical or

For example, following is a formula in a calculated account (headcount) on the typical personnel sheet:

```
IF(VersionMonth(THIS) >= VersionMonth(ROW.StartDate) AND (IsBlank(ROW.EndDate)  
OR VersionMonth(THIS) <= VersionMonth(ROW.EndDate)), 1, 0)
```

4. Inside the IF() function, **IsBlank(value)** can be used.

Returns true if the argument is blank or empty, false otherwise. If the argument is a reference to an account or assumption (e.g. ACCT.Hotels), the function returns true if the value of the account is empty. If the argument is a reference to a column on the sheet, the function returns true if the cell for the given row is blank.

For example: if(isblank(Row.StartDate), 0, 1)

IF vs IFF

The IFF() function can be used in place of IF(). IFF() calculates more quickly than IF() by evaluating only the parameters which are needed; however, this may result in potential errors being hidden in a branch of an IFF() which is not evaluated. If either branch of an IF() yields an error, the IF() itself yields an error, regardless of which branch is followed.

Adaptive Planning, Inc.

User Guide: Formulas

DIV vs DIVF

DivF([numerator], [denominator]) evaluates the quotient of the numerator divided by the denominator, returning zero if either the numerator or denominator are zero or blank.

The DivF() function can be used in place of Div(). DivF() calculates more quickly than Div() by evaluating only the numerator if the denominator returns a value which is non-zero, and ignoring the numerator if the denominator is zero or blank. However, this may result in potential errors being hidden in the numerator of a DivF() which is not evaluated because its denominator is already zero. If either the numerator or denominator of a Div() yields an error, the Div() itself yields an error, regardless of whether either of the parameters is zero.

NUMERIC FUNCTIONS

The following functions can be applied to numeric values, by manually inserting them into the formula:

Spread445(v, [numMonths]) or Spread454(v, [numMonths]) or Spread544(v, [numMonths])

Returns the portion of the total numeric value v per the specified 445, 454, or 544 rule.

The most common use is where v is a number or a formula representing a 12-month total, and the formula Spread445(v) appears in a range of cells in an account. This formula in a cell returns the value:

$(v/52)*4$ if the cell containing this formula is the first or second month of the fiscal quarter

$(v/52)*5$ if the cell containing this formula is the third month of the fiscal quarter

If v is a number or formula representing a total over some number of months other than 12, the number of months can be placed in the numMonths optional parameter. The calculation then becomes:

$(v/w) * 4$ or $(v/w) * 5$ where v (number of weeks) depends on numMonths:

If numMonths is: Then v is:

1	4
2	8
3	13
4	17
5	21
6	26
7	30
8	34
9	38
10	43
11	47
12	52 (the default)
etc.	

For example:

Spread445(1300,12) in January returns 100 (the result of $(1300/52) * 4$)

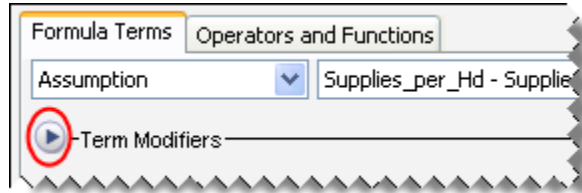
Spread445(1300,12,3) in March returns 125 (the result of $(1300/52) * 5$)

Adaptive Planning, Inc.

User Guide: Formulas

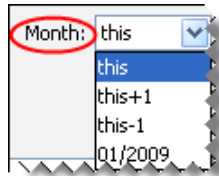
Term Modifiers

A chosen account can be qualified (restricted) in a variety of ways. In the Formula Terms tab, click on the arrow next to Term Modifiers to see these qualifiers.



MONTH

A time qualifier can be added from the Month drop-down menu. The default is “this,” which means this month. Previous months can be referenced by choosing this-1, and future months can be referenced by choosing this+1. Once the formula has been written to include this-1 or this+1, the “1” can be replaced in the cell edit bar with a different number, e.g. this+3. Or a specific date can be included by choosing 01/2009, then modifying it in the cell edit bar.



Further Time Range References

A formula can be manually modified in the cell edit bar to reference a range of time. The formula can include the beginning time period, followed by a colon (:), followed by the ending time period, e.g.

ACCT.Salaries [time=THIS:THIS+11], or:

ACCT.Salaries[Time=1/2008:12/2008]

For periodic accounts (e.g. revenues and expenses,) this formula will sum the 12 time periods. For cumulative accounts (e.g. headcount or balance sheet accounts,) it will return the value from the last time period in the range.

→ **Note:** The colon can be used in formulas only to designate a time range. It cannot be used elsewhere in formulas; e.g., it cannot be used to reference a range of accounts.

Date Functions

The following functions can be applied to dates, by manually inserting them into the formula.

Day(Date)	Returns the day of the month
Month(Date)	Returns the month in which the date occurs (Jan = 1)
Year(Date)	Returns the year in which the date occurs
Quarter(Date)	Returns the quarter in which the date occurs
FiscalYear(Date)	Returns the fiscal year in which the date occurs
FiscalMonth(Date)	Returns the month of the fiscal year in which the date occurs (1 – 12)
FiscalQuarter(Date)	Returns the fiscal quarter in which the date occurs (1 – 4)
VersionMonth(Date)	Returns the month of the version (first month = 0); this can be negative if the start date is before the start of the version

Adaptive Planning, Inc. User Guide: Formulas

VersionYear(Date)	Returns the year of the version (first year = 0)
DaysInMonth(Date)	Returns the number of days in the given month (e.g. 30 days in September)
ToDate(YYYY, MM, [DD])	Returns a date string from a year, month and day. If DD is omitted, then 15 is assumed. Must be used with Day(ToDate).

→ **Note:** These functions can be used with the time modifier “this,” or with a modeled sheets date column such as ROW.StartDate. They cannot be used with a literal date string, e.g. Day(01/15/2008.) An exception is the following, which will return the number of the day of the month for the date January 30, 2008:

=Day(ToDate(2008,1,30))

MonthFraction(startDate,endDate,[date],[daysInMonth])

This is typically used by the personnel modeled sheet to determine what portion of the month an employee should be paid for.

With none of the optional parameters, this returns the portion of the month of the current time period that overlaps the period between startDate and endDate. If startDate is NULL, the startDate value is assumed to be some time in the past, so that date > startDate. If endDate is NULL, the endDate is assumed to be some time in the future, so that date < endDate.

For example, if startDate is 1 March 2007, and endDate is 15 August 2007, then:

In a cell of a time period:

MonthFraction (1 March 2007, 15 August 2007) returns:

Jan 2007	0	(i.e. none of Sept 2007 is in the range)
Mar 2007	1	(i.e. 100% of March 2007 is in the range)
Apr 2007	1	(i.e. 100% of April 2007 is in the range)
Aug 2007	0.484 (15/31)	(i.e. 15/31 of August 2007 is in the range)
Sept 2007	0	(i.e. none of Sept 2007 is in the range)

The user can specify a particular time period (instead of the default, current time period) by including the optional third date parameter, **[date]**.

The optional fourth parameter, **[daysInMonth]**, is unlikely to be used, but is available if the days in the month are different than what is normal for that month (e.g. 25 days for September instead of 30.)

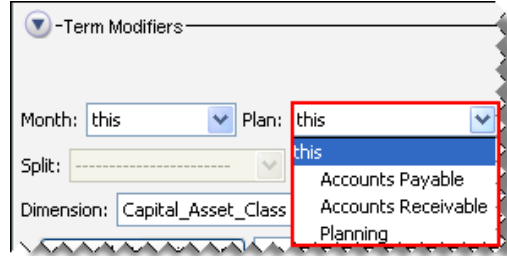
Date functions can be applied to expressions using the constant “This,” which means “this month,” e.g.:

IF(versionMonth(ROW.startDate) < versionMonth(THIS), 1, 0)

Adaptive Planning, Inc. User Guide: Formulas

PLAN

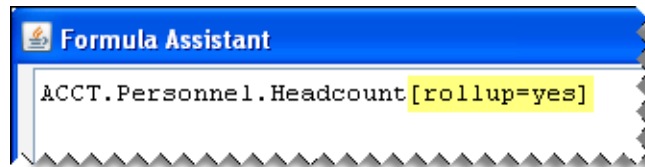
An account can be restricted to a certain plan. “This” plan is the default. If a user has access to a plan that does not roll up other plans, “this” will be the only choice in this menu. If a user has access to a plan which rolls up other plans, the menu will include this plan and all child plans. (There is a Search field here.)



If the chosen plan is a parent plan, the user has the choice to include data from the plan and all plans underneath it, or just the plan itself. Check the Rollup box if the formula should include data from this plan and all the children plans.



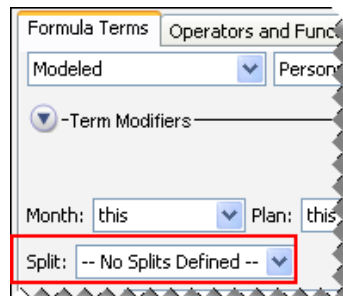
This will cause the formula to contain the account qualifier [rollup=yes], as shown here:



SPLIT

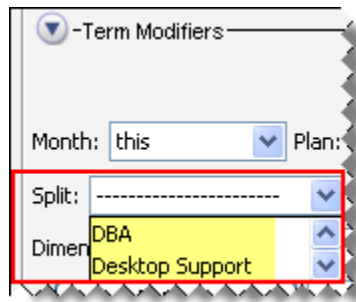
Within any given plan/account, there may be multiple line item detail. Each of these rows within a plan/account combination is called a split. If the formula is referencing an account with such splits, they can be chosen in the Split drop-down menu.

If there are no splits within the specified plan/account, the Split field will display No Splits Defined.



If there are splits within the specified plan/account, the Split field will have a dropdown menu, displaying the split labels.

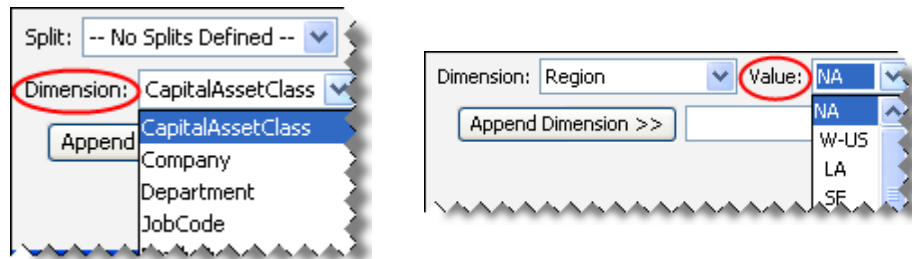
Adaptive Planning, Inc. User Guide: Formulas



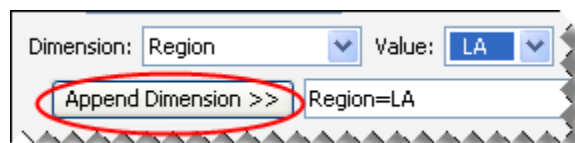
→ **Note:** It is most efficient to reference a dimension, if possible, rather than a split. This is because if the split is deleted, the formula will be in error.

DIMENSION

All dimensions in the plan can be seen in the Dimension drop-down menu. Once a dimension is chosen here, a dimension value can be chosen from the Value menu.



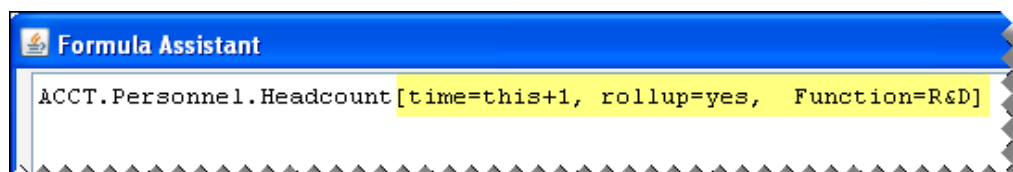
Once the dimension value has been chosen, be sure to click on the Append Dimension button prior to inserting the qualified account into the formula.



Once all qualifiers have been chosen, and dimensions have been appended if applicable, click on Insert into Formula.

→ **Note:** If an account was incorrectly inserted into the formula, it may be necessary to delete it before inserting the proper account. (Otherwise the next selected account will be inserted into the formula after the incorrect account.) This can be done by deleting the incorrect account from the top of the Formula Assistant.

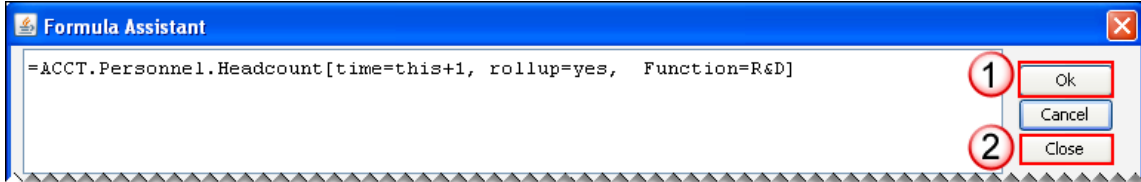
All chosen qualifiers will be included in square brackets in the formula, separated by commas. If the formula is being written or modified in the cell edit bar, the qualifiers can be in any order within these brackets.



Adaptive Planning, Inc. User Guide: Formulas

Finalizing the Formula

Once the formula has been built in the Formula Assistant, be sure to click on the OK button before closing the Formula Assistant. Simply closing the Formula Assistant is not sufficient to apply the formula.



Once the formula has been created this way, it can be seen at the top of the sheet in the Cell Edit bar.

→ **Note:** Be sure to click on the green checkmark icon, or on the Enter button on the keyboard, to finalize the formula.



Adaptive Planning, Inc. User Guide: Formulas

3. Administrators: Creating Formulas

Using the Formulas Tab

The Formulas Tab functionality pertains to placing formulas in account setup. This tab and its related functionality are available only to users who have been assigned the Administrative role, including permission to Model, as shown below:

The screenshot shows the 'Role Details' form for the 'Administrative User' role. The 'Role Permissions' section includes the following options:

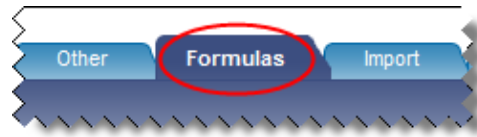
- Set Using Template: Standard User Report Only User Administrative User
- Sheet Access: Yes No
- Report Access: Yes No
- Salary Level Detail Access: Yes No
- Admin Access: Yes No
 - Model (includes: plans, sheets, accounts, dimensions, patterns and formulas)
 - Versions
 - Users and Roles

The Formulas Tab provides the following benefits to administrators, and is especially useful during plan implementations:

- Default formulas can be created in certain accounts in certain plans, as determined by the administrator. The same account can hold a different formula in different plans. This means that, for example, Supplies expense can be calculated one way in Marketing (e.g. a function of the number of planned trade shows) and another way in Engineering (e.g. a function of headcount.)
- Unless the administrator specifies an account to be read-only (from within Sheet Administration), these formulas can be modified at the plan level. (e.g. a specific Marketing department might require a supplies expense calculation different from that of the other Marketing departments.) A formula might be intended to be a helpful starting point that the individual planners can override as they see fit, or, alternatively, as something that should not be changed. If the formulas should not be changed, then the account should be Read Only.
- On an account-by-account basis, the administrator can choose whether actual data should be calculated or imported.
- When the first sub-account is added to an account that previously did not have any sub-accounts, all formulas are copied to the new sub-account from the parent account.

Adaptive Planning, Inc. User Guide: Formulas

Click on the **Formulas** Tab

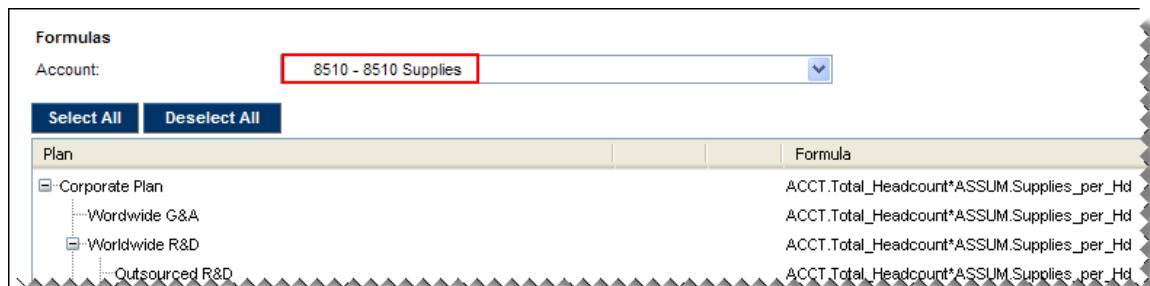


Formulas Tab Functionality Overview

First choose the version from the version selector; this is the version that will be modified.

Following is an overview of how the administrator will proceed through the Formulas screen. Details of each are below.

1. Choose an **account** from the drop-down list, e.g. Supplies.



Plan	Formula
Corporate Plan	ACCT.Total_Headcount*ASSUM.Supplies_per_Hd
Worldwide G&A	ACCT.Total_Headcount*ASSUM.Supplies_per_Hd
Worldwide R&D	ACCT.Total_Headcount*ASSUM.Supplies_per_Hd
Outsourced R&D	ACCT.Total_Headcount*ASSUM.Supplies_per_Hd

2. Below the account drop-down is a grid containing the **plan tree** in one column and formulas in another column, showing the association of a formula (if any) to the corresponding account for that plan.
3. As different accounts are selected, the formulas in the Formula column of the plans list change to reflect the account.
4. The contents of the list of accounts and the list of plans are fixed. Only the formulas (in the plans list) change as the user makes selections.
5. The administrator can set or modify the formula for the accounts selected, but not directly in the grid (details below.)
6. User edits made directly within the sheets of a plan override formulas, but the administrator has the capability to remove such edits from a plan.

Details of this functionality follow.

Formula Functionality Details

ACCOUNT LIST

The drop-down list of accounts shown here includes all accounts in the plan, except for Modeled Accounts, Locals, and Assumptions.

PLANS LIST/GRID FORMAT

The user can inspect and modify formulas shown in the plans grid. Information is displayed in the grid, and the user can select one or more rows, but no modifications are allowed directly in the grid.

Adaptive Planning, Inc.

User Guide: Formulas

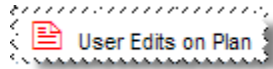
The grid consists of three columns:

1. **Plans:** This column contains the plan tree. The tree is collapsible.

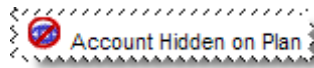


2. **Plan State:** This column contains codes that indicate the state of the selected account for the plan on this row. The codes are as follows:

- **Edited:** If a user has edited a cell on this plan for the version and account selected above, the edited icon appears in this column. User edits to an account made on a sheet **will always override formulas**. The Modify Formulas Area (below) describes how the Administrator has the ability to remove these user edits. The edited icon will also appear if there was already a value in that plan/account combination, before the formula was created.



- **H (Hidden):** If the account is hidden on this plan for the version and account selected above, the hidden icon appears in this column. While it is possible to force a formula into an account on a plan on which that account has been hidden, it may have unintended consequences. An edited icon combined with a hidden icon indicates data entered on a plan but not visible in that plan.



3. **Formula:** This column contains the formula for this plan given the version and account chosen from the lists above. The formula cannot be edited directly in the grid (see Modify Formulas Area below). If the plan does not have a formula for the chosen version and account, then this cell is blank.

MODIFY FORMULAS AREA

Directly below the grid are controls that allow the user to make modifications related to formulas. There are two classes of modifications:

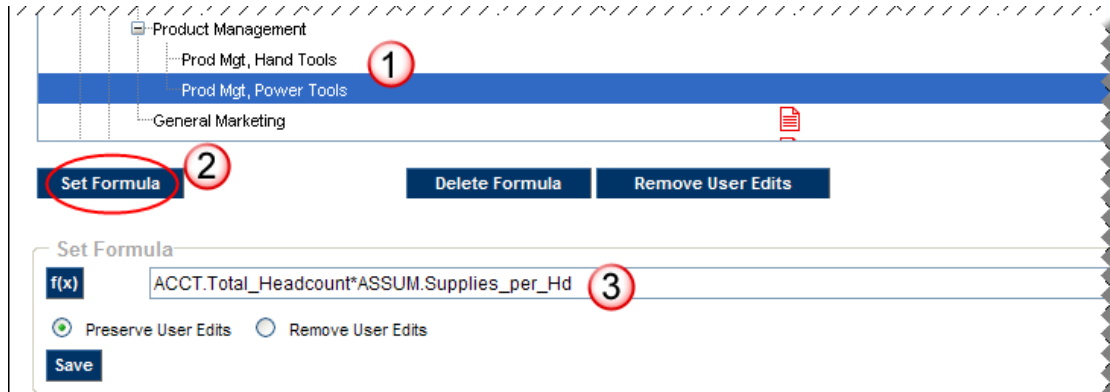
1. Set formulas for one or more plans, and delete formulas for one or more plans.
2. Remove user edits.

These operations may be combined.

Adaptive Planning, Inc. User Guide: Formulas

To **set** or modify a formula for one or more plans:

1. Select the plans to receive the formula
2. Click on the **Set Formula** button (or double-click on the existing formula)
3. Enter the formula in the formula bar at the bottom of the page, using the Formula Assistant if desired




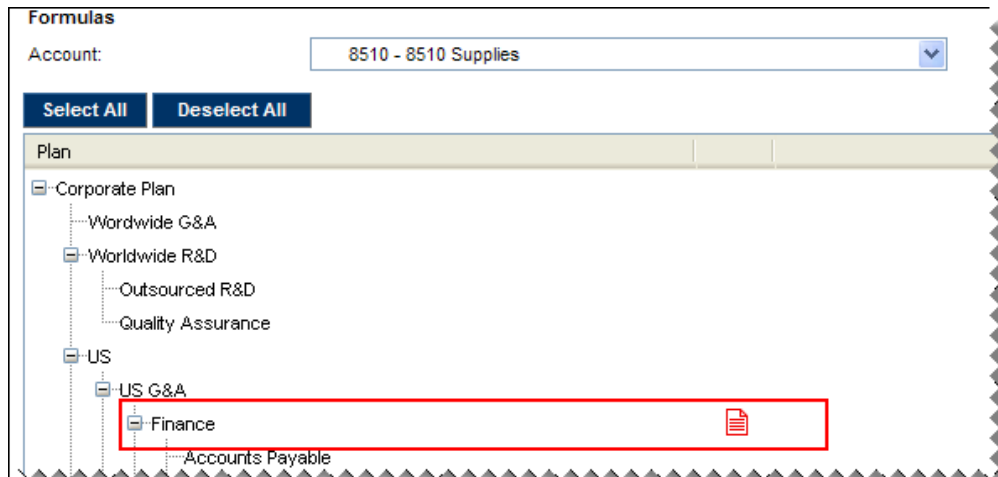
What is displayed in this formula box depends on the plan rows that have been selected in the grid above.

- If no rows are selected, then the box is blank.
- If all selected rows have a blank formula, then the box is blank.
- If all selected rows contain exactly the same formula, then the box contains that formula.
- If formulas of the selected rows differ, or if some selected rows have a formula and others do not, then the box is blank.

USER EDITS FROM SHEETS

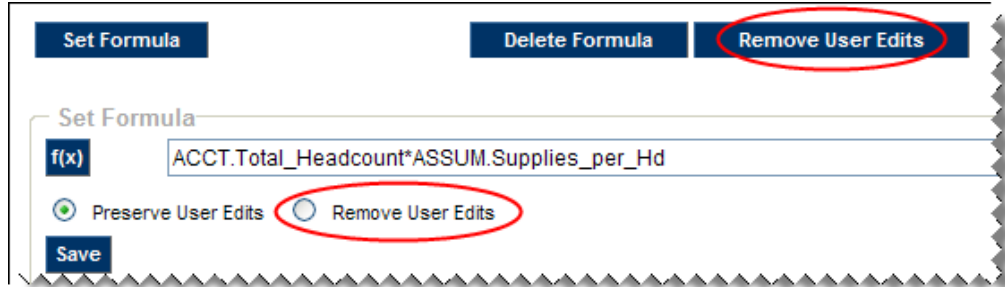
Unless an account has been designated as read-Only (in sheet administration, Customize Sheet for Subplans,) then a formula can be overridden by a user from within the plan.

If a user has changed a formula from a sheet, the Plan Administrator will see it flagged with a special symbol in the Formula grid for a specific plan and account. 



Adaptive Planning, Inc. User Guide: Formulas

The administrator may want to force the use of the formula by removing these user edits. If a plan containing user-edited data is selected in this grid, the administrator can click on the Remove User Edits button or radio button. **Doing this will delete whatever values or formulas the user has entered in this account for the chosen plans.**



The screenshot shows a user interface for editing formulas. At the top, there are three buttons: "Set Formula", "Delete Formula", and "Remove User Edits". The "Remove User Edits" button is circled in red. Below these buttons is a "Set Formula" section with a text input field containing the formula "ACCT.Total_Headcount*ASSUM.Supplies_per_Hd". Below the input field are two radio buttons: "Preserve User Edits" (which is selected) and "Remove User Edits" (which is circled in red). A "Save" button is located at the bottom left of the "Set Formula" section.

The administrator may select multiple plans with disparate formulas, and choose Remove User Edits without changing the formulas of the selected plans.

The state of the User Edits radio buttons depends on the plan rows that have been selected in the grid above.

- When no selected rows have an edit (including when no rows are selected at all), the radio button is set to Preserve and is grayed out. The text next to the radio button is also grayed out.
- When one or more selected rows have been edited, the radio buttons and associated text are active. Preserve User Edits is the default selection.

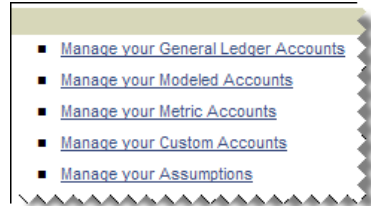
If the User Edits radio button is set to Remove User Edits, then all user edits made in sheets are deleted in all selected plans for the selected version and account (including splits.)

Adaptive Planning, Inc. User Guide: Formulas

Related Account Administration

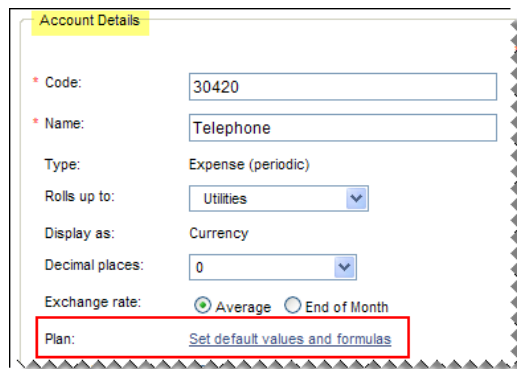
The same formula functionality can also be seen in account administration, as described in the section of the User Guide for Administrators called Account Administration.

Go To Admin, Manage your...Accounts



SET DEFAULT VALUES AND FORMULAS

Within Account Details, for General Ledger Metric, and Custom accounts, there is a Set Default Values and Formulas link that presents the Formulas Admin screen (described above), with the currently selected account displayed. (For Metric accounts, there is a Formulas box, where the account's formula must be entered.)



Account Details

* Code: 30420

* Name: Telephone

Type: Expense (periodic)

Rolls up to: Utilities

Display as: Currency

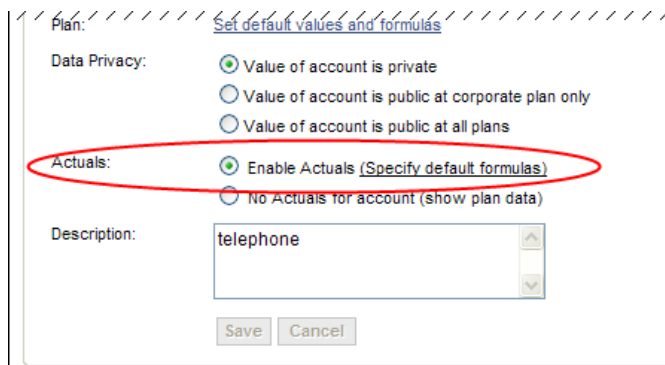
Decimal places: 0

Exchange rate: Average End of Month

Plan: [Set default values and formulas](#)

Calculate Actuals

In the Actuals section of account details, one of the choices is Enable Actuals. If this is chosen, there is a link called Specify Default Formulas.



Plan: [Set default values and formulas](#)

Data Privacy: Value of account is private
 Value of account is public at corporate plan only
 Value of account is public at all plans

Actuals: [Enable Actuals \(Specify default formulas\)](#)
 No Actuals for account (show plan data)

Description: telephone

Save Cancel

This means that the administrator supplies a formula to be used to calculate actuals for this account. A similar Formula screen is used.

Adaptive Planning, Inc.

User Guide: Formulas

Formula Access to Modeled Sheet Data

Some of the data created in modeled sheets is not available in formulas outside of the modeled sheet. This helps to contain modeled-sheet-specific data to the sheet, and to maintain simplicity for budget managers. Only sheet-building administrators need to be involved with some of the modeled sheet formulas.

Universally-Available Modeled Sheet Data

The following items related to modeled sheets are universal in scope; that is, they can be referenced in formulas anywhere in the system where a formula can be entered. (For more information on each of these items, please see the User Guide for Creating Modeled Sheets.)

- Calculated Accounts
- Timespan Element
- Initial Value Element

Wherever lists of accounts are shown (e.g. in the Formula Assistant, the Report Builder tree, etc.) universally available modeled sheet accounts are grouped by sheet.

Where there is a menu listing accounts by type, modeled sheet accounts are grouped under the Modeled type.

A universally available account can be referenced in a formula in the modeled sheet by using the ACCT.code format. This references a rollup of that account. These rollups can also be qualified by dimensions (e.g. ACCT.Personnel.Salary[Region=US-West]).

It is possible for modeled sheet accounts to have the same code as an account outside the sheet. If there is some other account in the system with the same code, it is not visible from within the modeled sheet formulas.

Outside the modeled sheet, the universally available accounts are referenced using the notation ACCT.modeledsheetname.code, which distinguishes them from other accounts that may have the same code. E.g. ACCT.Personnel.Salaries is the modeled salary account from the personnel sheet; ACCT.Salaries is the GL account called Salaries.

REFERENCING MODELED SHEET ROWS

By default, rows on a modeled sheet do not have a label, and thus cannot be referenced individually through formulas.

Last Name	First Name	...	Job Code	WC Code	Benefits	Start
Ronson	Mark		Level 3	5606	Yes	2/5/06
Johnson	Elizabeth		Level 2	8810	Yes	5/6/04
Sparks	Jack		Level 4	8810	Yes	12/1/04

Exceptions can be made to this via the modeled sheet properties, but this is not recommended. The reason is that formula references to individual rows by name make the model more error-prone; if a row is deleted or renamed, the formula is in error. E.g.:

 =ACCT.Personnel.Salaries[split=Ronson]

Adaptive Planning, Inc. User Guide: Formulas

The model will be more reliable if formulas use dimensions as account qualifiers, rather than row names, wherever possible. E.g.:



=ACCT.Personnel.Salaries[Job Code = Level 3, WC Code = 5606]

For more information on this topic, please see the User Guide for Creating Modeled Sheets, in the section called Sheet Properties/Settings.

Locally-Available Modeled Sheet Data

Some modeled sheet elements, including sheet assumptions and lookup table codes, are local in scope; that is, they can only be referenced in formulas within their modeled sheet. They cannot be referenced by users on any sheet, including the modeled sheet with which they are associated.

Most formulas within the modeled sheet are built on the concept of a row. Formulas refer to the columns and calculated accounts associated with the current row by using the prefix ROW. For example, some elements associated with a personnel modeled sheet could be:

- ROW.FirstName (a text column)
- ROW.StartDate (a date column)
- ROW.BenefitsChoice (a text selector)
- ROW.BenefitsLookup (the selected row of the benefits monthly lookup table)
- ROW.Benefits (a calculated account)

This ROW syntax is only available within the modeled sheets.

The plan element cannot be referenced in a formula (i.e. there is no ROW.Plan).

When evaluating a formula in:

- A calculated account
- A sheet assumption
- A timespan account
- An initial value element's account

There is an implied time context: the time period in which the formula is being evaluated. The Time= qualifier can be used to specify a different time period or time range. However, for elements that do not vary over time:

- Text
- Text selector
- Number
- Date
- Dimension

The Time= qualifier is not allowed.

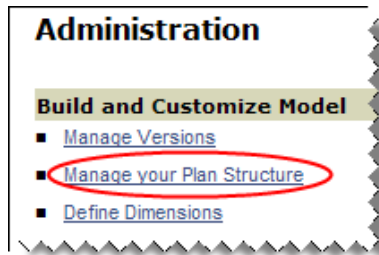
Sheet assumptions are referenced in formulas within the model using the ASSUM.code format. If there is a global assumption with the same code, is not visible within the model. Sheet assumptions are not visible outside of their modeled sheet.

Adaptive Planning, Inc.

User Guide: Formulas

Plan Administration Related to Formulas

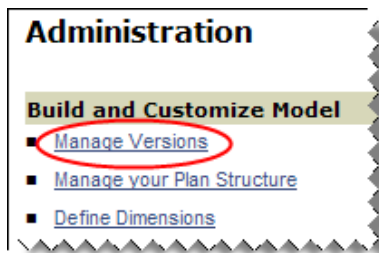
Go To Admin, Manage your Plan Structure



When adding a new subplan, the new plan is created with copies of all formulas of its parent plan. For example, the Salary GL account has been set up in the Formulas tab in all plans to link to the modeled salary account from the personnel sheet. When a new subplan is added, this plan will also have the formula in the Salary account.

Version Administration Related to Formulas

Go to Admin, Manage Versions



When creating a new version (through the Add New operation, which makes a copy of an existing version), the new version is created with copies of all formulas of the original plan.