Milestones PROFESSIONAL®

TUTORIALS

Lesson 11
ValueSets and DataGraphs

In this lesson you will learn how to:

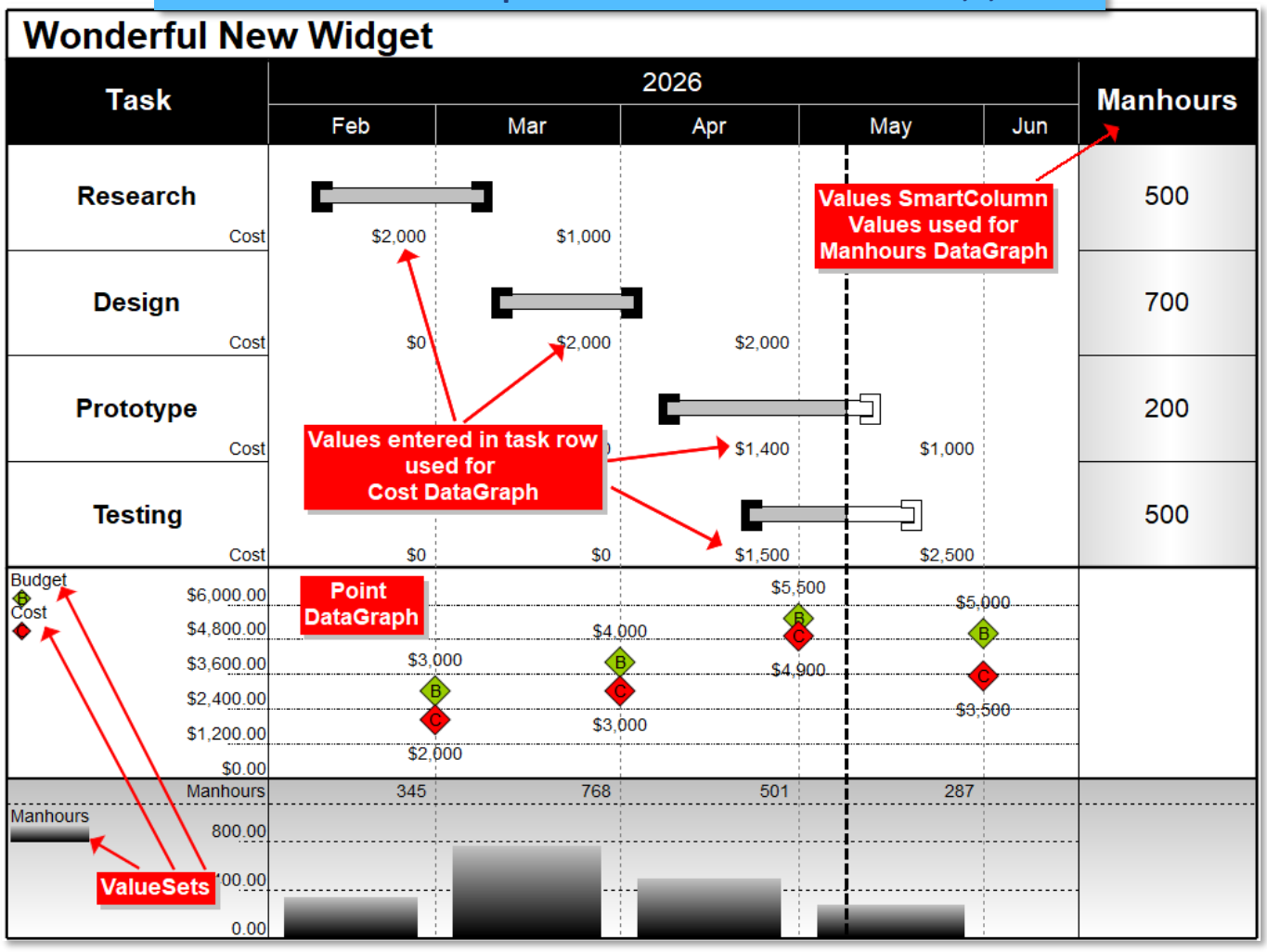
- Create a Type 1: Keyed-In Global Values ValueSet
- Create a Type 2: Sum of Values Keyed into a Task Row ValueSet
- Create a Type 3: Allocate Column Values Across a Timeline ValueSet
- Enter the values for a ValueSet
- Set up DataGraphs which display the ValueSets
- Create a Values SmartColumn
- Enter values in the Values SmartColumn

Numeric information can be shown along with a schedule. These numbers can be contained in value categories called ValueSets (e.g. Manhours, Budget, and Costs) and then graphed on a DataGraphs, as well as totaled for each row (in columns).

There are five different types of ValueSets possible with Milestones Professional. In this lesson you will learn about Types 1, 2, and 3. You will learn how to work with these ValueSet types, build a DataGraph and more.

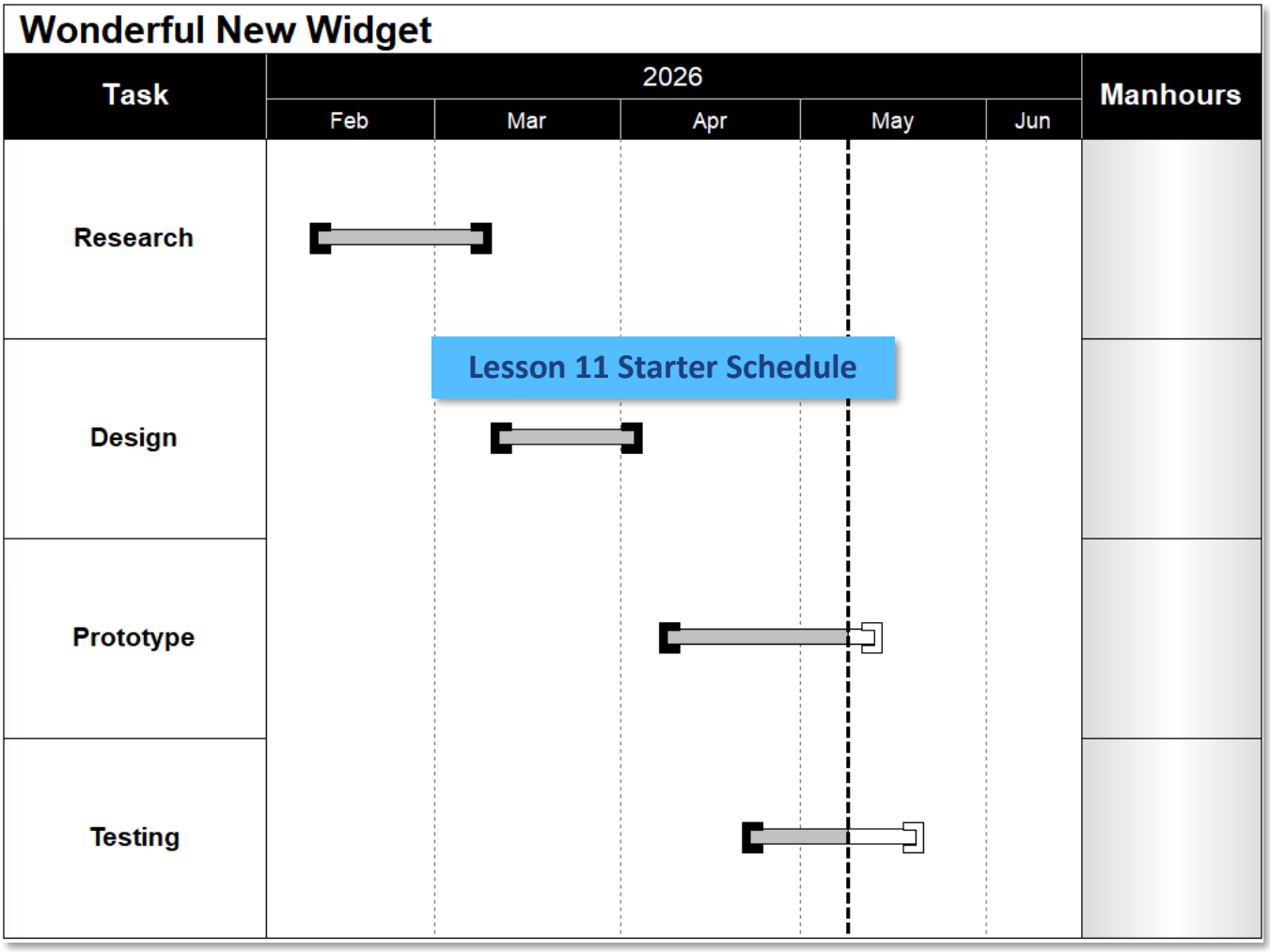
Up to 9 ValueSets can be added to a schedule. They can be graphed on up to 3 DataGraphs, a maximum of 8 ValueSets per DataGraph.

Schedule with DataGraphs Generated from ValueSets 1,2, and 3



Open the schedule for this Lesson

1. Choose the toolbar *File tab*.
2. In the Files and Templates: Open and Save section select *Open Samples or Lesson*. The Open a Sample Chart dialog displays.
3. Under Select a Folder below to Open and select *Lessons*. The Lesson schedules will display in the window to the right. Pick *Lesson 11 Starter Schedule.mlq*.
4. Save the schedule to an accessible folder on your computer. On the *File* tab, in the Files and Templates: Open and Save section, choose *Save As*…. In the menu that displays choose *Chart*. Name, then save the schedule.

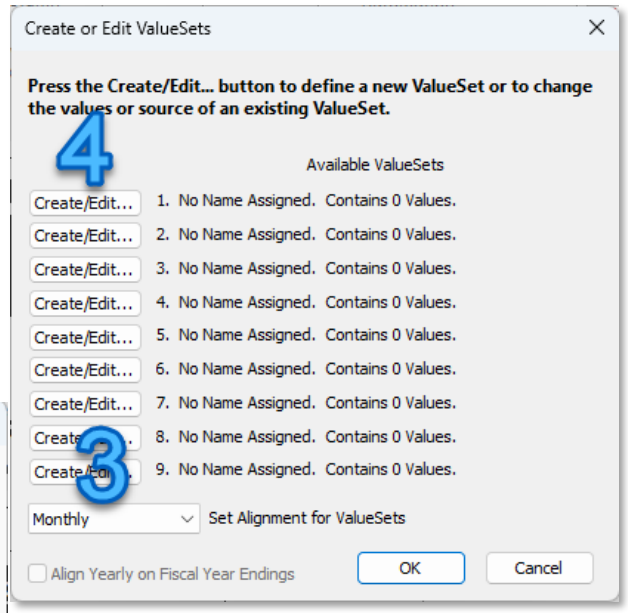


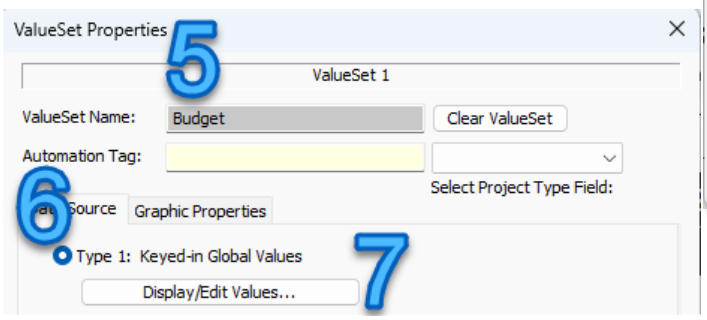
Create a Type 1: Keyed-in Global Values ValueSet

Create the Budget ValueSet

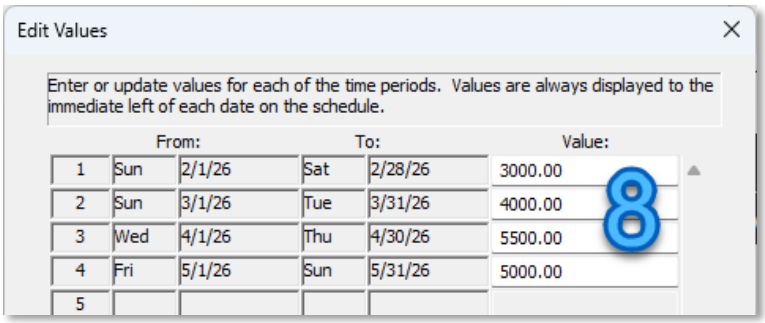
First, create one Type 1 ValueSet. These values are entered by specified time increments (daily, weekly, monthly, etc.) and do not relate to specific tasks. Here, you will enter monthly Budget values for the whole project.

1. Click the toolbar *Tools tab*.
2. In the Graph Options section choose *Setup ValueSets*. The Create or Edit ValueSets dialog box displays.
3. For the Set Alignment for ValueSets option choose *Monthly* as the time period to align the values.
4. Click the first *Create/Edit* button to the left of *1: No Name Assigned …* The ValueSet Properties dialog displays.





5. For ValueSet Name enter *Budget*.
6. Under the Data Source tab, choose *Type 1: Keyed-in Global Values* as the ValueSet type.
7. Click the *Display/Edit Values...* button. The Edit Values dialog box displays.
8. In the Edit Value dialog box enter the following values a monthly budget value in each cell under Value:
   February: *3000*
   March: *4000*
   April: *5500*
   May: *5000*



The **From** date for row 1 is defined by the start date of this schedule (2/1/26). The **To** date for row 1 is defined by alignment chosen in Step 3 (for this tutorial Monthly). Thus, row 1 is February's budget, row 2 is March's budget, and so on. The final date where a value can be entered is established by the end date of the schedule. If the end date is not the last day of a time increment selected a value can not be entered for the last time increment as seen in this tutorial. The last day of this schedule is 6/15/2026 therefore the last budget value that can be added is for May. A June budget value can not be inserted because the entire month of June is not included in the date range of the schedule.

9. Choose *OK* to return to the ValueSet Properties dialog box (keep this dialog box open for the next set of instructions.)

Create a Type 1: Keyed-in Global Values ValueSet (continued)

Create Budget ValueSet (continued)

10. Chose the *Graphic Properties tab* to set the ValueSet Properties for Budget ValueSet.

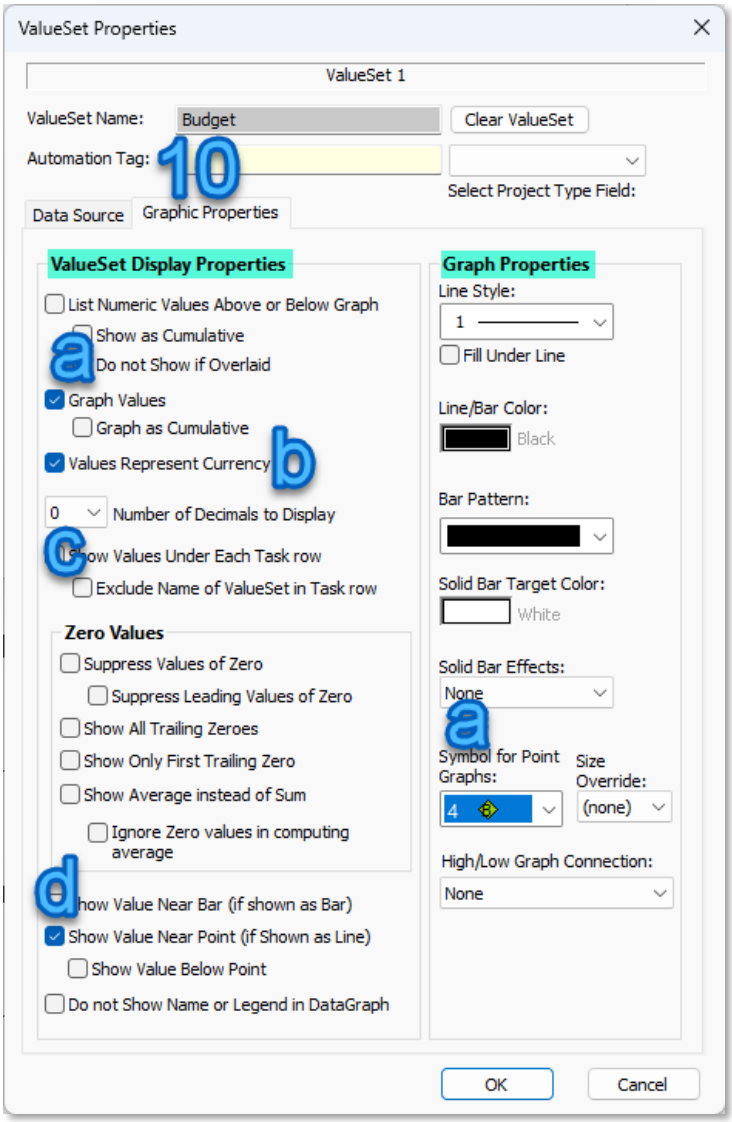
UNDER ValueSet Display Properties

a. ☑*Graph Values* to have the Budget ValueSet values graph as bars, lines, or points in the DataGraph.

b. ☑*Values Represent Currency* and the $ will display on all values for the Budget ValueSet in the DataGraph.

c. Select *0* for *Number of Decimals to Display*. All values for the Budget ValueSet will not show any decimal values.

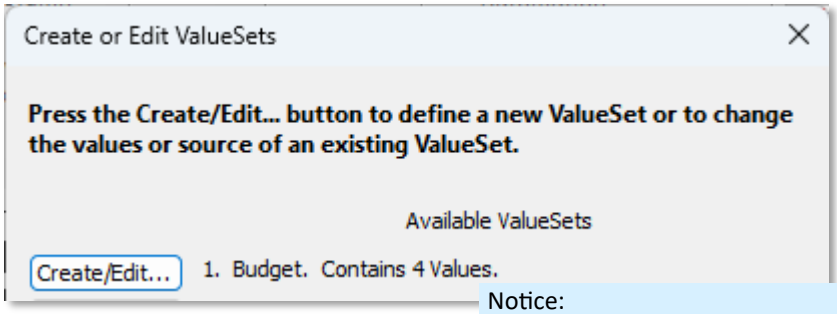
d. ☑*Show Value Near Point*. For this example the Budget ValueSet is going to be a point graph. For each month a point (represented by a symbol) will have the Budget value for that time increment displayed above the point (symbol).



UNDER ValueSet Graphic Properties

a. Budget ValueSet values are going to be graphed as points. Under *Symbol for Point Graphs:* select *symbol 4 green diamond with letter B*. The list of symbols available for points is a reflection of the toolbox. The green diamond was set up in the toolbox, see tutorial Lesson 4 for more information on setting up symbols in the toolbox.

11. Click *OK* to return to the Create or Edit ValueSets dialog box (keep this dialog box open for the next set of instructions).



Notice:
Row 1. Budget. Contains 4 Values referencing the values entered in step 8 on previous page.

Create a Type 2: Sum of Values Keyed into Task Rows ValueSet

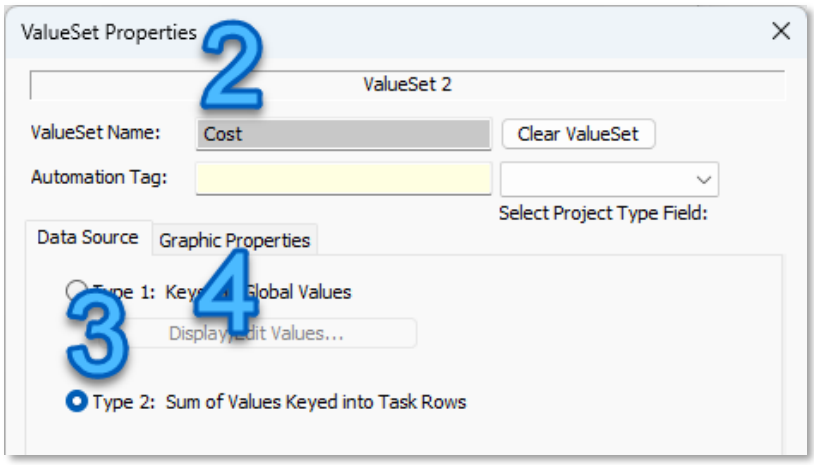
Create the Cost ValueSet

Next you will create a Type 2 ValueSet. These values are entered by specified time increments (this tutorial monthly) for a specific project task. Later, you will enter monthly Costs values for each of the project tasks.

1. Click the *Create/Edit* button to the left of *2: No Name Assigned …* to display the ValueSet Properties dialog



2. For ValueSet Name enter *Cost.*
3. Under the *Data Source* tab, for ValueSet type, choose *Type 2: Sum of Values Keyed into Task Rows*.
4. Click the *Graphic Properties* tab to change the ValueSet Display Properties and Graph Properties. (Keep dialog open and proceed to next page.)



Create Cost ValueSet (continued)

4. Click the *Graphic Properties* tab to change the ValueSet Display Properties and Graph Properties.

   UNDER ValueSet Display Properties

   a. ☑*Graph Values* to cause the Cost ValueSet to be graphed.

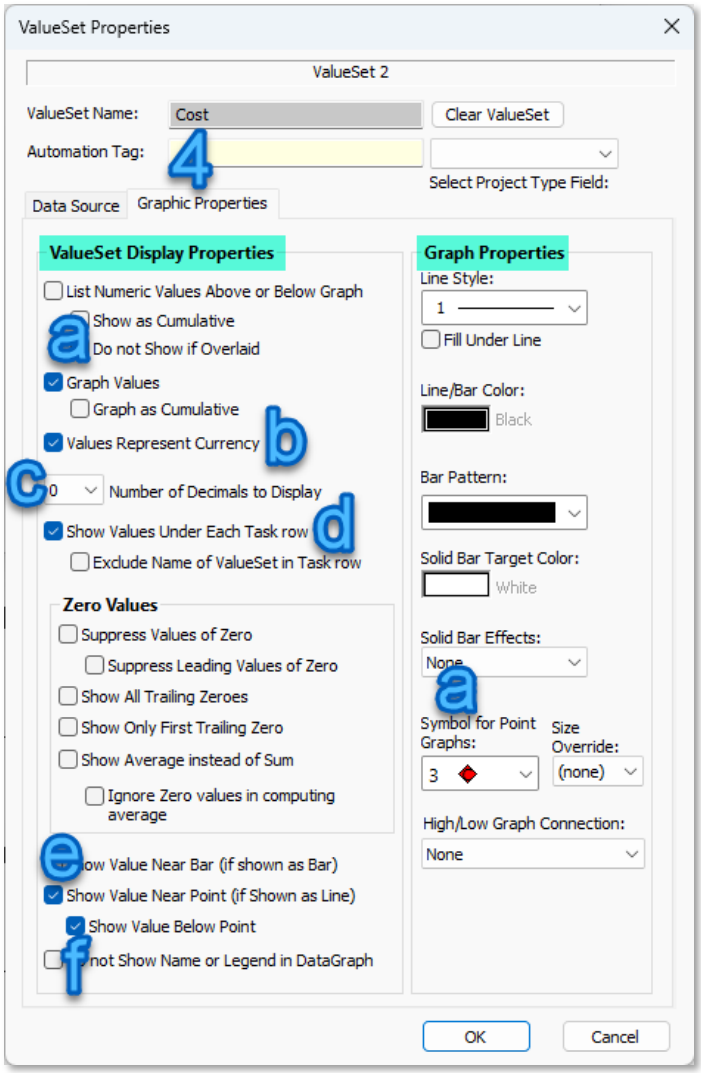
   b. ☑*Values Represent Currency.* The $ will display on all values for the Cost ValueSet in the DataGraph.

   c. Select *0* for *Number of Decimals to Display.* No decimal places will be shown for values in the Cost ValueSet.

   d. ☑*Show Values under Each Task Row.* Because Cost is a Type 2 ValueSet the values entered are associated with a task row. The values can be displayed in their task row by checking on this option. A Milestones message displays informing that the font used for these values is Symbol Text font To change choose Format |Default Text | *Symbol Text*.

   e. ☑*Show Value Near Point*. For this example the Cost ValueSet is going to be a point graph. For each month a point (represented by a selected symbol) will have the Cost value for that time increment displayed.

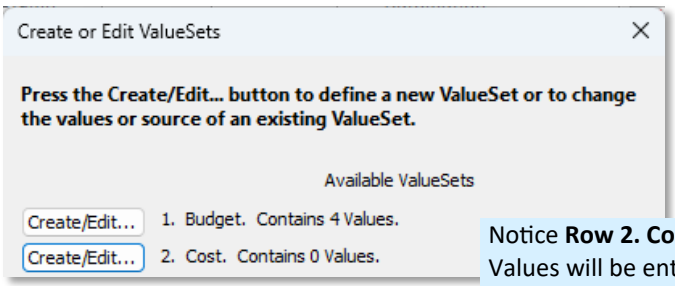
   f. ☑*Show value Below Point* to have the Cost values display below the point (symbol).



   UNDER Graphic Properties

   a. Cost ValueSet values are going to be graphed as points. Under *Symbol for Point Graphs: select symbol 3 (red diamond with letter C)*. The list of symbols available for points is a reflection of the toolbox. The red diamond that was set up in the toolbox (see tutorial Lesson 4 for more information on setting up symbols in the toolbox.)

5. Click *OK* to return to the Create or Edit ValueSets dialog box (keep this dialog box open for the next set of instructions).



Notice **Row 2. Cost. Contains 0 Values.** Values will be entered later.

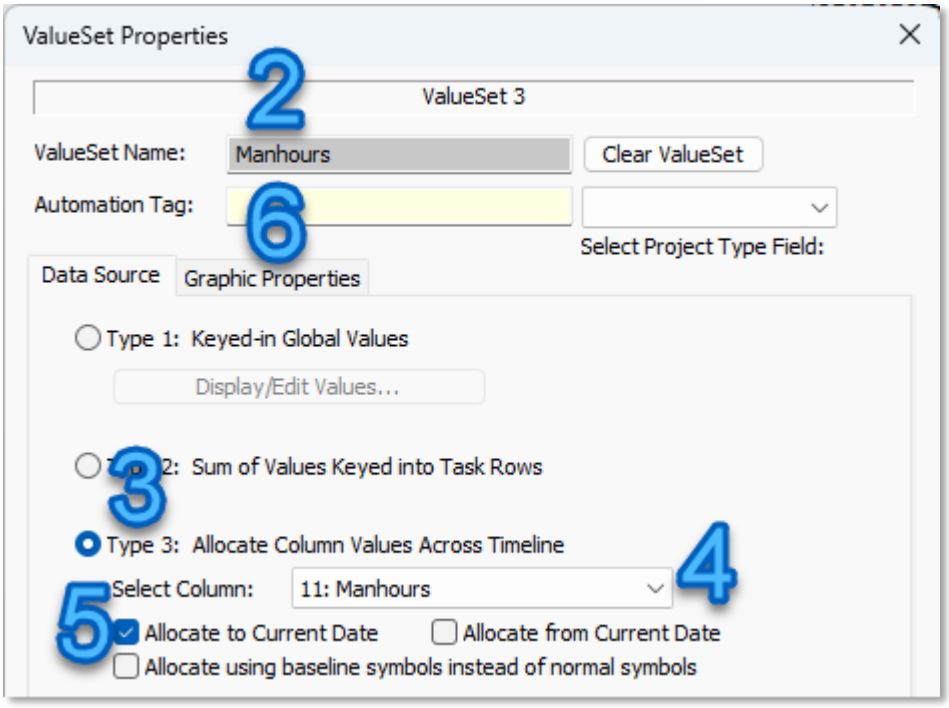
Create a Type 3: Allocate Column Values Across a Timeline ValueSet

Create the Manhours ValueSet

Now, create a Type 3 ValueSet. These values are taken from a Values SmartColumn, evenly distributed across each task's Gantt bar, and graphed by time period in the DataGraph. Here, the Manhours column will contain the values for this Manhours ValueSet.



1. Click the third *Create/Edit button to the left of 3: No Name Assigned* … to reach the ValueSet Properties dialog box.



2. For ValueSet Name enter *Manhours*.
3. Under the Data Source tab, choose *Type 3: Allocate Column Values Across Timeline* as the ValueSet type.
4. Next to Select Column, select *11. Manhours*.
5. ☑ *Allocate to Current Date*. Values will only graph to the schedule's current date.

(Keep dialog open and proceed to next page.)

Create a Type 3: Allocate Column Values Across a Timeline ValueSet (continued)

Create the Manhours ValueSet (continued)

6. Click the *Graphic Properties tab* to Set the ValueSet Properties .

   UNDER ValueSet Display Properties

   a. ☑*List Numeric Values above or Below Graph* to have Manhours ValueSet values display in each time increment above the graph. For values to display below graph select option when setting up the DataGraph.

   b. ☑*Graph Values* to have Manhours ValueSet values graph as bars, lines, or points in the DataGraph.

   c. Select *0 for Number of Decimals to Display.* All Values for the Cost ValueSet will not show any decimal values.

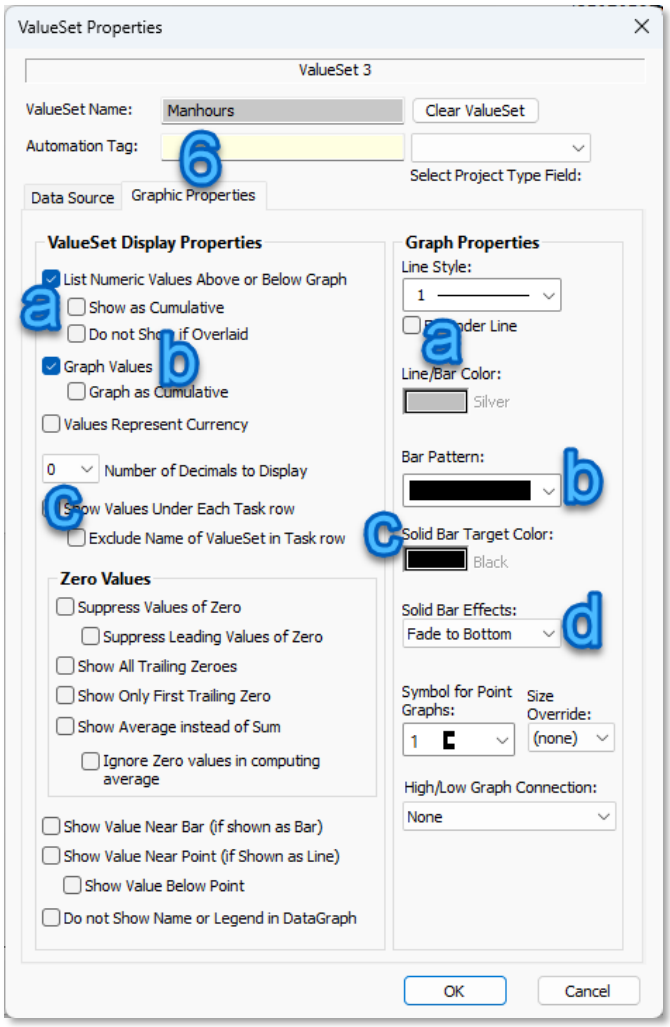
   UNDER Graphic Properties

   a. Manhour ValueSet values are going to be graphed as bars with a gradient from Silver to Black. Select the Line/Bar Color: *Silver*

   b. For Bar Pattern, pick *solid* which is the first option in the drop down.

   c. For Solid Bar Target Color pick *Black*

   d. For Solid Bar Effects pick *Fade to Bottom*.



7. Click *OK* to return to the Create or Edit ValueSets dialog box, where you should have these three ValueSets: Budget, Cost and Manhours



Notice Row 3. Manhour. Contains 0 Values.
Values will be entered later.

8. Choose *OK* to return to the schedule. You will not notice any change in the schedule.

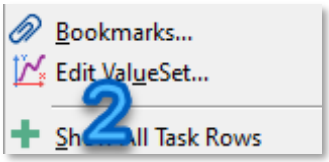
Enter the Values for the ValueSet

Enter Cost ValueSet Values

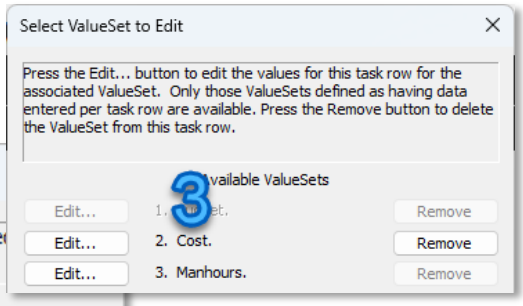
The Cost ValueSet already exists, yet does not contain values. On a row-by-row basis, you will now enter those values.

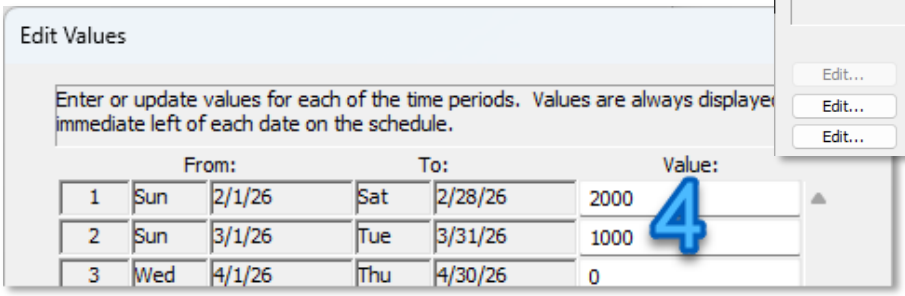
Enter the costs for the Research task row

1. Click ↖ (*the toolbox Arrow tool*.)
2. On the schedule, right-click the word *Research*. From the right click menu choose *Edit ValueSet*. The Select ValueSet to Edit dialog box displays.

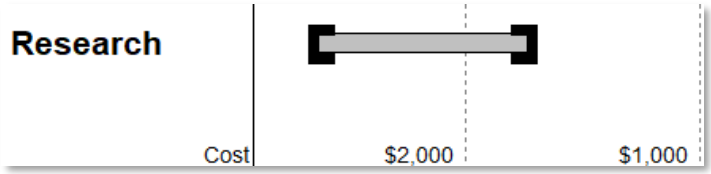


3. Click the *Edit* button to the left of *2. Costs*.
4. The Edit Values dialog box appears. Since Research takes place only in February and March, enter *2000* for February and *1000* for March .





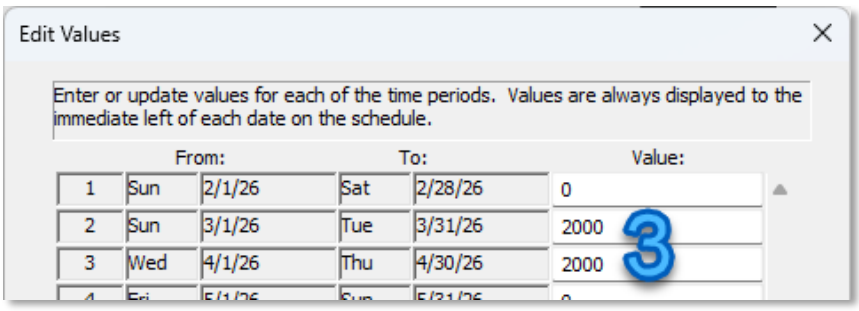
5. Click *OK*, and *OK* again, to return to the schedule. You will see the values you entered in the Research task row however the graph will not appear yet.

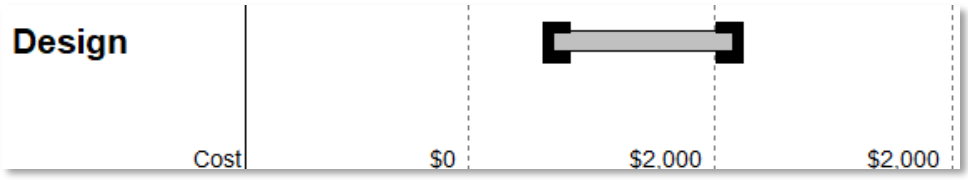


Choose F9 (screen refresh) on the keyboard to refresh the Milestones schedule to show any values or words that are not fully visible.

Enter the costs for the Design task row

1. Right-click the word *Design*, and from the right click menu choose *Edit ValueSet*. The Select ValueSet to Edit dialog displays.
2. Click the *Edit* button to the left of *2. Costs*.
3. Since Design takes place only in March and April, enter *2000* for March and *2000* for April.
4. Click *OK*, and *OK* again, to return to the schedule. You will now see those values in the Design task row.



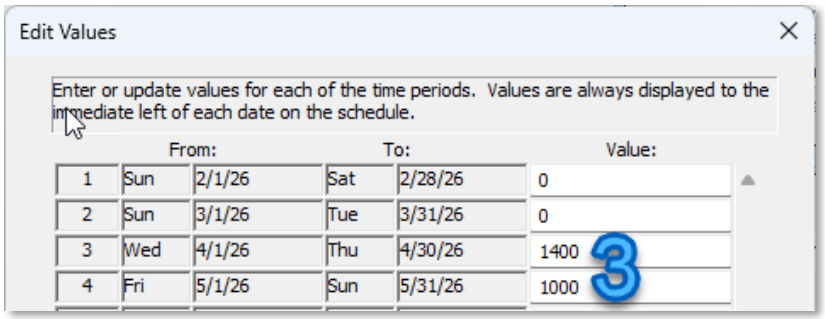


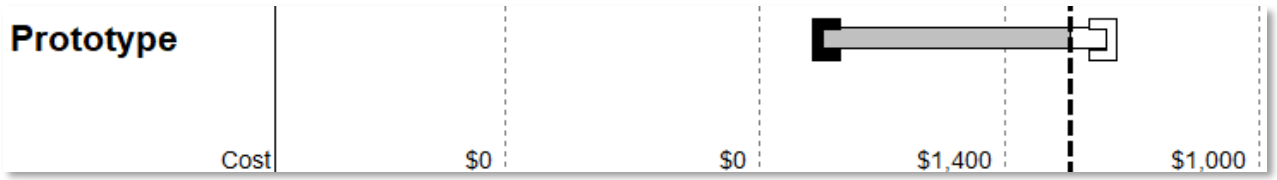
Enter the Values for the "Costs" ValueSet (continued)

Enter Costs ValueSet Values

Enter the costs for the Prototype task row

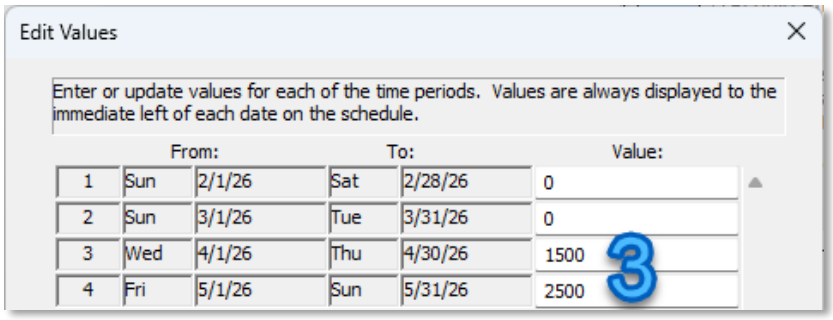
1. Right-click the word Prototype, and from the right click menu choose *Edit ValueSet*. The Select ValueSet to Edit dialog displays.
2. Click the *Edit* button to the left of 2. Costs.
3. Since Prototype takes place only in April and May, enter *1400* for April and *1000* for May.
4. Click *OK*, and *OK* again, to return to the schedule. You will see the values you entered in the Prototype.

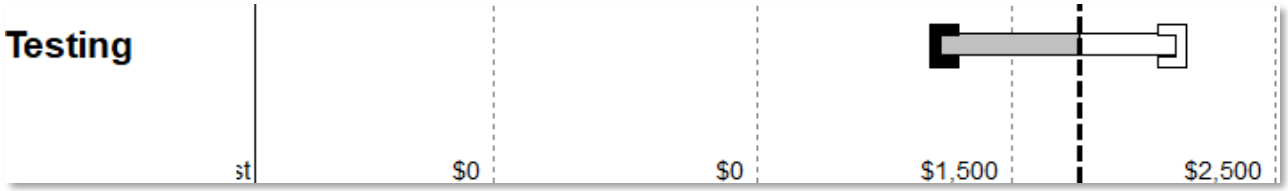




Enter the costs for the Testing task row

1. Right-click the word *Testing*, and from the right click menu choose *Edit ValueSet*. The Select ValueSet to Edit dialog displays.
2. Click the *Edit* button to the left of *2. Costs*.
3. Since Testing takes place only in April and May, enter *1500* for April and *2500* for May.
4. Click *OK*, and *OK* again, to return to the schedule. The values entered will display in each task row however, the graph will not appear yet.





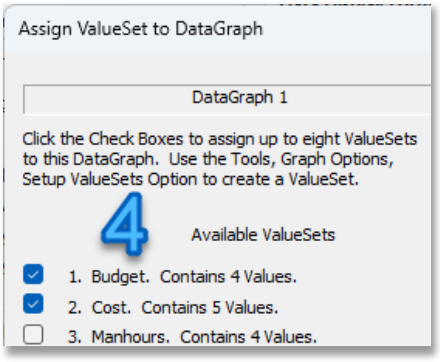
Set up the DataGraphs which display the ValueSets

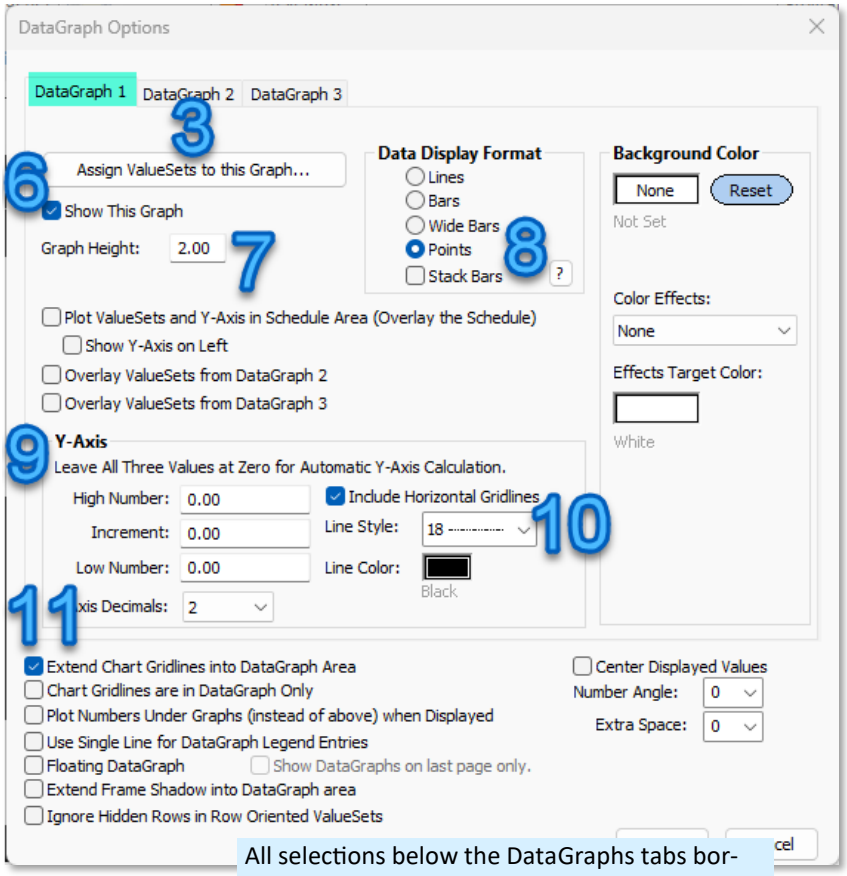
In the previous steps, you set up three ValueSets (**Budget, Costs,** and **Manhours**) and entered the values for two of those ValueSets (**Budget** and **Costs**). Next, you will set up two DataGraphs: The first will display **Budget** and **Costs**, and the second will display **Manhours**.

A schedule can have a total of three DataGraphs containing up to 8 ValueSets.

Set up DataGraph 1

1. Choose the toolbar *Tools tab*.
2. In the Graph Options section choose *Setup DataGraph*. The DataGraph Options dialog box displays with DatagGraph 1 options showing.
3. Select the *Assign ValueSets to this Graph...* button. The Assign ValueSet to DataGraph dialog box displays.





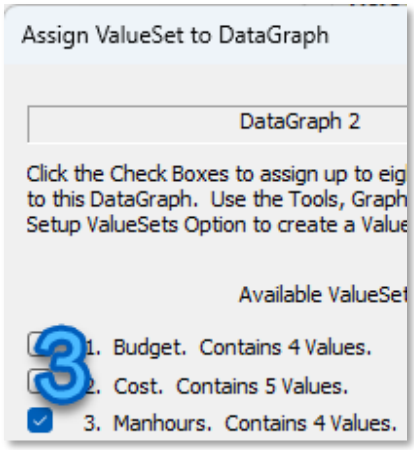
All selections below the DataGraphs tabs border are generic settings for all 3 DataGraphs.

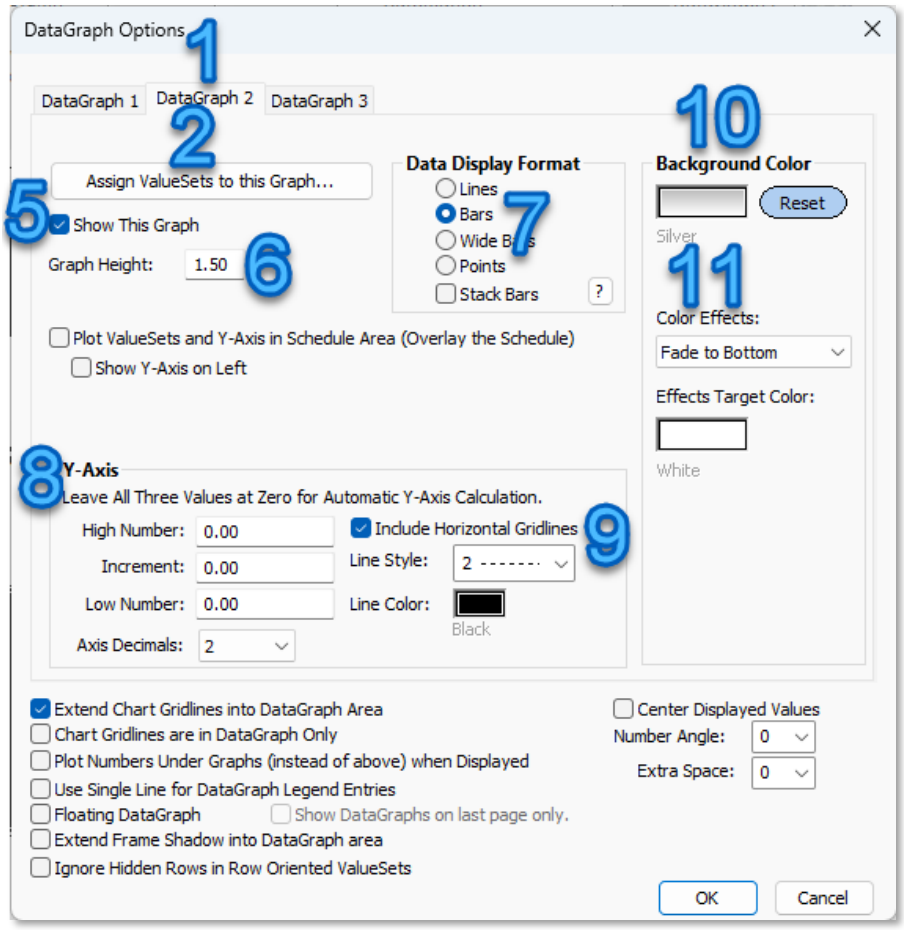
4. ☑*1. Budget. Contains 4 Values* and *2.Cost. Contains 5 Values.*
5. Click *OK* to go back to the DatagGraph 1 options.
6. ☑*Show this Graph*.
7. For Graph Height enter *2.00*.
8. For Data Display Format choose *Points*. Values entered for budget and costs will show on the DataGraph as the symbols selected under the respective ValueSets Graphic Properties tab.
9. Under Y axis you can select values for High Number, Increment and Low Number. These values build the Y-axis values of the DataGraph. For this tutorial we will leave the values at zero allowing Milestones to automatically build the Y axis values.
10. ☑*Include Horizontal Gridlines.* For Line Style select *18*. For Line Color select *Silver*.
11. ☑*Extend Chart Gridlines into DataGaph Area*. Monthly vertical gridlines that are showing in the schedule area will also show in the DataGraph. (Keep this dialog box open for the next set of instructions).

Set up the DataGraphs which display the ValueSets (continued)

Set up DataGraph 2

1. Select the *DataGraph 2* tab. All options will be available for selection for DataGraph 2.
2. Select the *Assign ValueSets to this Graph...* button. The Assign ValueSet to DataGraph dialog box displays.



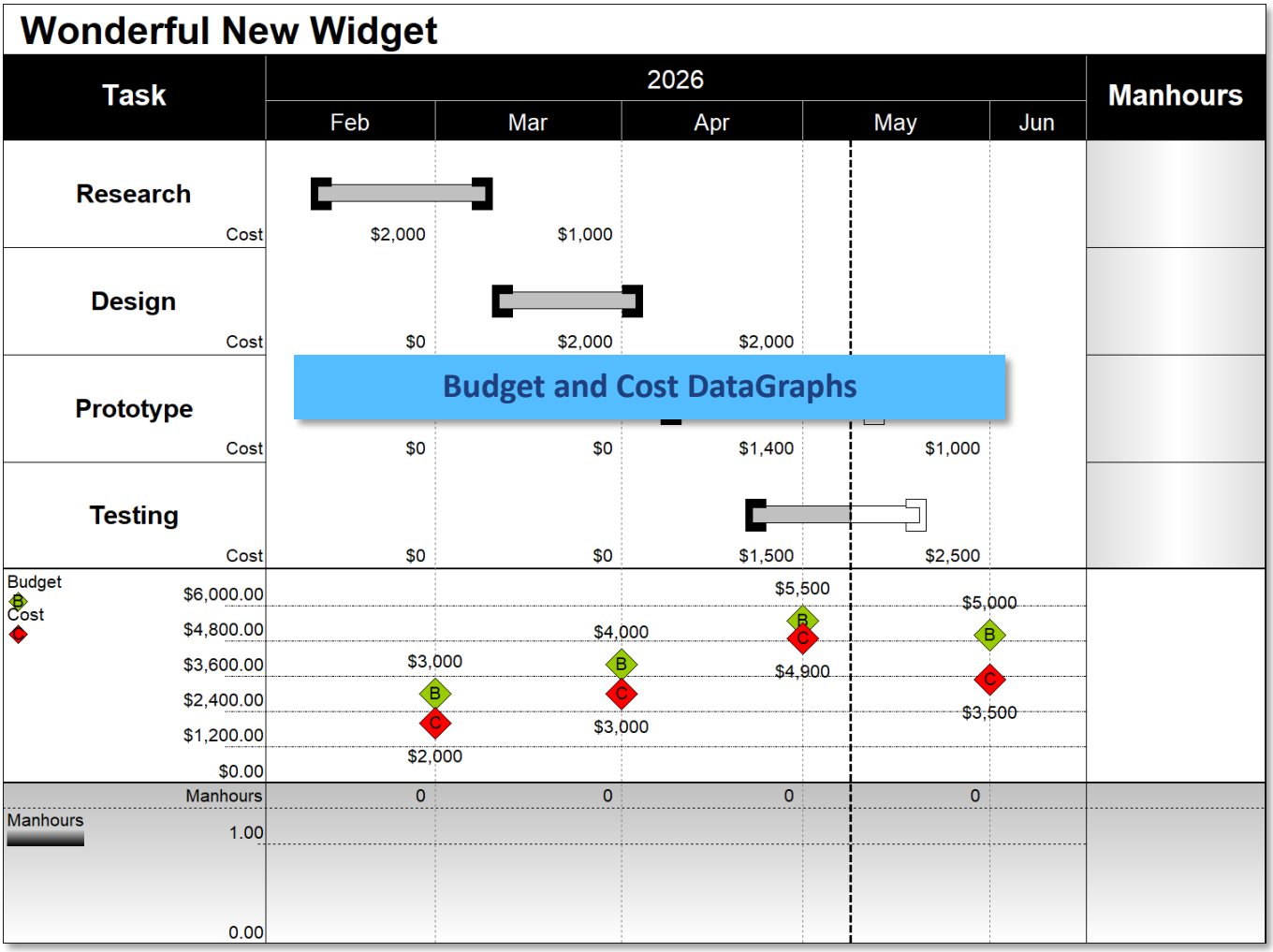


3. ☑*3. Manhours. Contains 0 Values*.
4. Click *OK* to go back to the DatagGraph 2 options.
5. ☑*Show this Graph*.
6. For Graph Height enter *1.50*.
7. For Data Display Format choose *Bars*. Values entered for Manhours will show on the DataGraph as bars.
8. Leave the High Number, Increment and Low Number zero. This lets Milestones automatically build the Y axis values.
9. ☑*Include Horizontal Gridlines.* For Line Style select *2*. For Line Color select *Black*.
10. For Background Color select *light silver*.
11. For Color Effects choose *Fade to Bottom*.
12. Click *OK* to return to the schedule. Budget and Cost DateGraph is generated. See next page for the result.

Set up the DataGraphs which display the ValueSets (continued)

Result

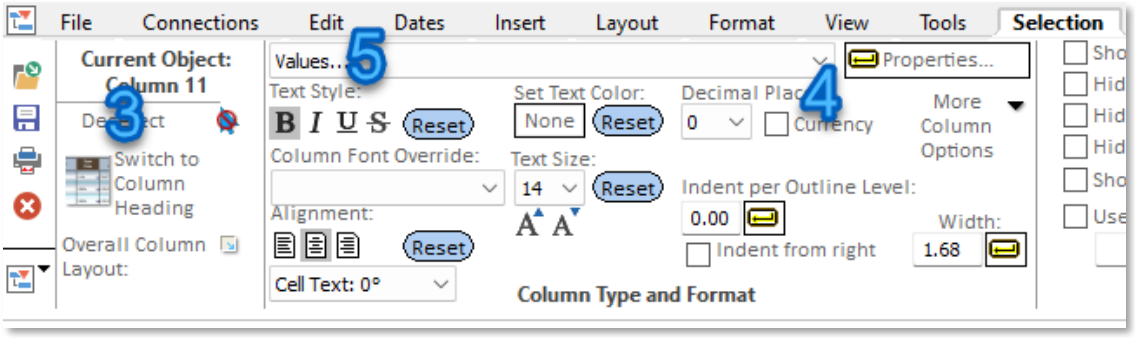
The Manhours DataGraph is generated however the values will not populate until the Manhours column is set up.



Create a Values SmartColumn

You will change the **Manhours** column to a Values SmartColumn, then enter values for that column.

1. Click ↖ (*the toolbox Arrow tool*.)
2. Click the *Manhours column heading*. The toolbar will change to the Selection tab with Current Object: Column Heading.



3. Choose *Switch to Column*.
4. In the Column Type and Format section, click the *down arrow next to (none)*.
5. From the drop down menu choose *Values*. The Indicators for Values column dialog box displays.
6. In the Indicators for Values column dialog box make no changes from the default options already chosen, just select *OK* to return to the schedule. You will now see 0's in the Manhours Values SmartColumn.

Enter values in the Values SmartColumn

1. Click T (*the toolbox text tool*.)
2. In the Manhours column click once on the *Research task row cell*.
3. Enter a value of *500*.
4. Select *enter or the down arrow key* on your keyboard, to get to the next task row's Manhours cell. Notice, the DataGraph will build.
5. Enter the following values and watch the Datagraph build:
   In Design cell enter *700*
   In Prototype cell enter *200*
   In Testing cell enter *500*
   When the last value is entered do not click enter or down arrow. Simply click with your mouse outside the schedule. If you do select enter or the down arrow this will take you to a second page. To get back to the first page choose the *Edit* tab. In the Delete section choose *Current page*. Below is the Manhours DataGraph populated with bars.

Manhours
500
700
200
500

Enter values in the Values SmartColumn (continued)

Results

