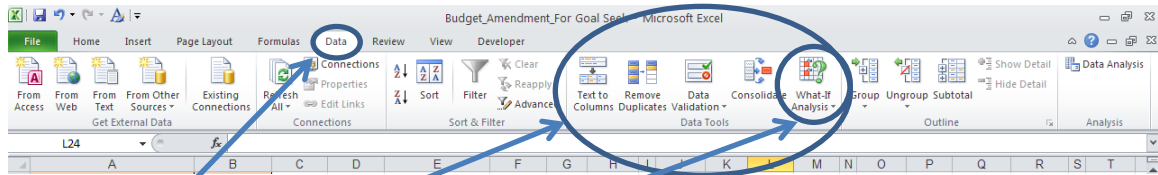


Goal Seek: Performing What-If Analysis

Sometimes analyses are constrained by the need for a specified output [answer]. Many times we perform the analysis through trial and error by trying various input values until the required answer is reached. This process is time consuming and can be frustrating. Excel provides a tool called Goal Seek that preforms the process for you automatically.

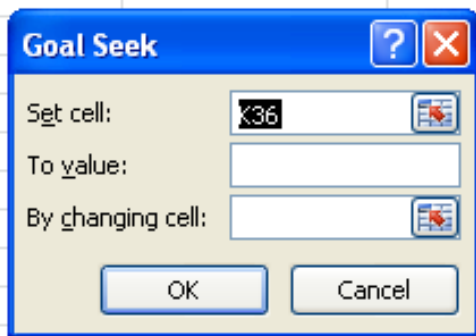
Goal Seek:

Goal Seek is one of Excel's "What-If Analysis" tools. To use the Goal Seek tool select the What-If Analysis button found on the Data Tab.



1. Data TAB
2. Data Tool Group
3. What-if Analysis Button

Select "Goal Seek" from the 3 options. This opens the Goal Seek dialog box. In this dialog box use the **Set cell** field to specify the cell in which the output value [answer] will appear. In the **To value** field, enter the value [answer] you want to achieve as the output, your Goal. In the **By changing cell field**, specify the cell containing the data to change.



Click the **OK** button to begin. If the answer value cannot be exactly reached, the closest value found will be listed.

Example 1 – You have been asked to use \$5,000 in available Salary and Fringe in Fund 20000 to increase the salary for a position in Fund 10600. You can't use more than \$5,000 from Fund 20000. You also want to minimize the fringe, so as to leave no unspent funds. You know the actual current salary and fringe costs for the position in Fund 10600 from your finalized BDW. You create a worksheet using all known information, and then begin working to solve your problem.

The worksheet display below mirrors the manual process one might go through to calculate the answer. So to start, you place \$5,000 in Fund 20000 Account code 521000 [cell: K9]. Once fringe is included you will spend \$921 more than you were asked to. If you continue to change cell K9, you will eventually reach the correct amount. Goal Seek just does it faster.

Budget_Amendment_For Goal Seek - Microsoft Excel

	Have (Actuals)			Need			Delta					
	Fund	20000	10600	Total	Fund	20000	10600	Total	Fund	20000	10600	Total
9	521000	46,572		46,572	521000	0	46,572	46,572	521000	0	0	0
10	551000	0	3,564	3,564	551000	0	3,564	3,564	551000	0	0	0
11	552000	0	5,315	5,315	552000	0	5,315	5,315	552000	0	0	0
12	553000	0	4,140	4,140	553000	0	4,140	4,140	553000	0	0	0
13	Total	0	59,591	59,591	Total	0	59,591	59,591	Total	0	0	0
14				check		0		0				
16				Split		0.000%	100.000%	100.000%				

Worksheet Set Up With Goal Seek data tool.

You want the total for fund 20000 to equal \$5,000. The **Set cell** is the location of the answer [K13], the **“To value:”** field is the numerical value of the answer [\$5,000], and the **“By changing cell”** field is the independent data element. In this example we are used the salary. Once you click **OK**, you receive your answer. Please note that with trial and error or pencil and paper you too can come to this answer, Goal Seek just does it faster.

This spreadsheet shows the calculations before the “Goal Seek” data tool is accessed. The existing calculations’ total will exceed \$5,000.

Budget_Amendment_For Goal Seek - Microsoft Excel

	Have (Actuals)			Need			Delta					
	Fund	20000	10600	Total	Fund	20000	10600	Total	Fund	20000	10600	Total
9	521000	5,000	46,572	51,572	521000	4,661	46,911	51,572	521000	(339)	339	0
10	551000	383	3,564	3,947	551000	357	3,590	3,947	551000	(26)	26	0
11	552000	538	5,315	5,853	552000	529	5,324	5,853	552000	(9)	9	0
12	553000	0	4,140	4,140	553000	374	3,766	4,140	553000	374	(374)	0
13	Total	5,921	59,591	65,512	Total	5,921	59,591	65,512	Total	0	0	0
14				check		0		0				
16				Split		9.038%	90.962%	100.000%				

Goal Seek dialog box:

Set cell: \$K\$13
 To value: 5000
 By changing cell: \$K\$9

Goal Seek Status dialog box:

Goal Seeking with Cell K13 found a solution.
 Target value: 5000
 Current value: 5,000

This is the answer generated.

Budget_Amendment_For Goal Seek - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Developer

From Access From Web From Text From Other Sources Existing Connections Refresh All Connections Sort Filter Filter Advanced Text to Columns Remove Duplicates Data Validation Consolidate What-If Analysis Group Ungroup Subtotal Show Detail Hide Detail Data Analysis

K13 =SUM(K9:K12)

		Have (Actuals)			Need			Delta				
	Fund	20000	10600	Total	Fund	20000	10600	Total	Fund	20000	10600	Total
9	521000	4,223	46,572	50,795	521000	3,932	46,863	50,795	521000	(291)	291	0
10	551000	323	3,564	3,887	551000	301	3,586	3,887	551000	(22)	22	0
11	552000	454	5,315	5,769	552000	447	5,322	5,769	552000	(7)	7	0
12	553000	0	4,140	4,140	553000	320	3,820	4,140	553000	320	(320)	0
13	Total	5,000	59,591	64,591	Total	5,000	59,591	64,591	Total	0	0	0
14					check	0	0					
16					Split	7.741%	92.259%	100.000%				