How to use solver add-in to solve equations in Excel?
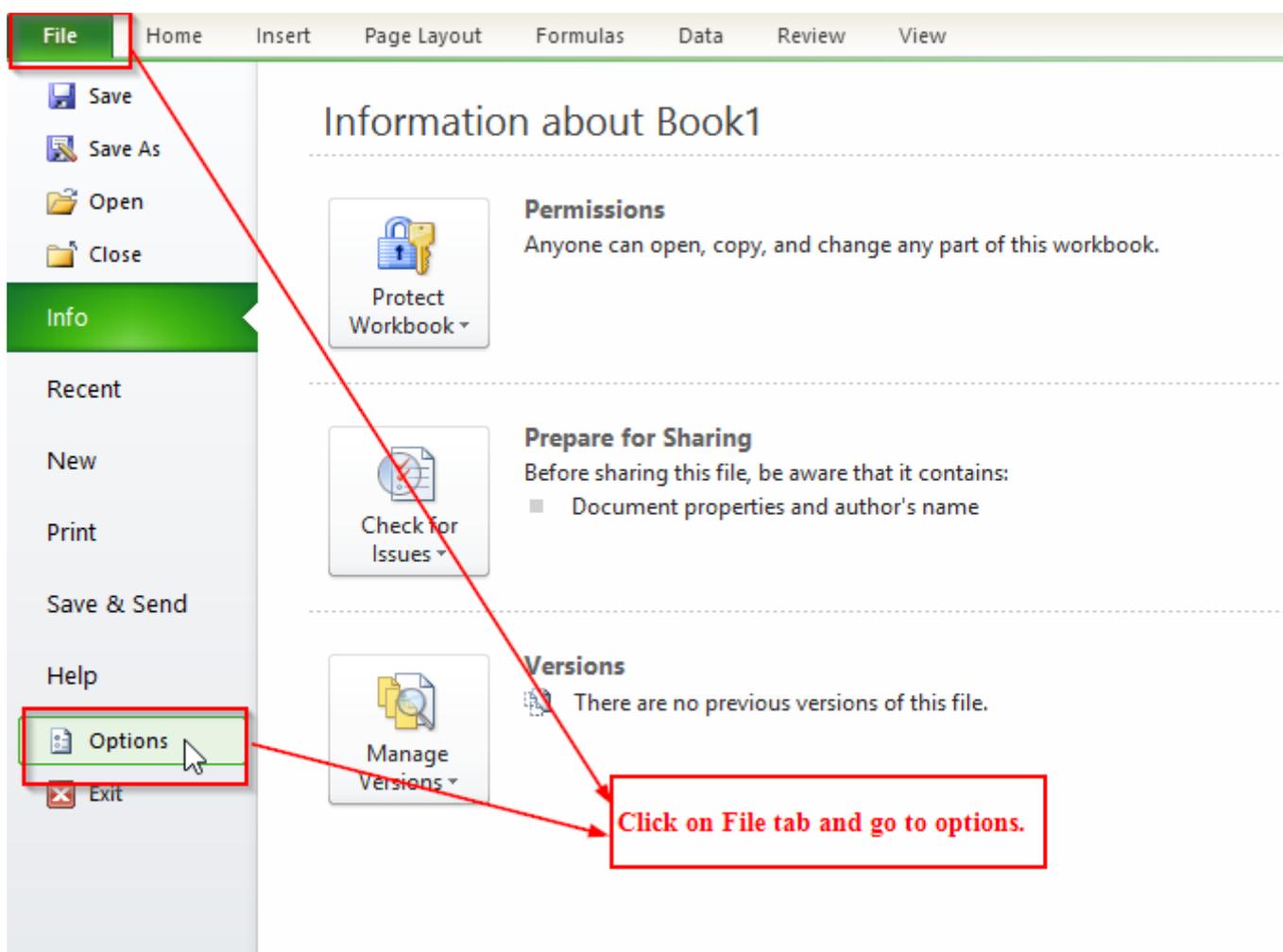
Explain Solver add-in in excel:

Have you done reverse calculation? I am sure you must have done it. For example, we all calculate passing mark requirement before final semester exam. What we do is to sum of first and second semester result and then subtract it from passing mark requirement. We do it many times in day to day life. Now EXCEL can helps us to do it in faster way using **SOLVER ADD-IN!!**

Excel provides tool called solver add-in which is used to find optimal solutions to various problems. It does reverse calculation and provide us best solution. SOLVER Add-in is very useful in solving equations.

First of all it is required to **load solver add-in** in excel. Following are the steps to be followed.
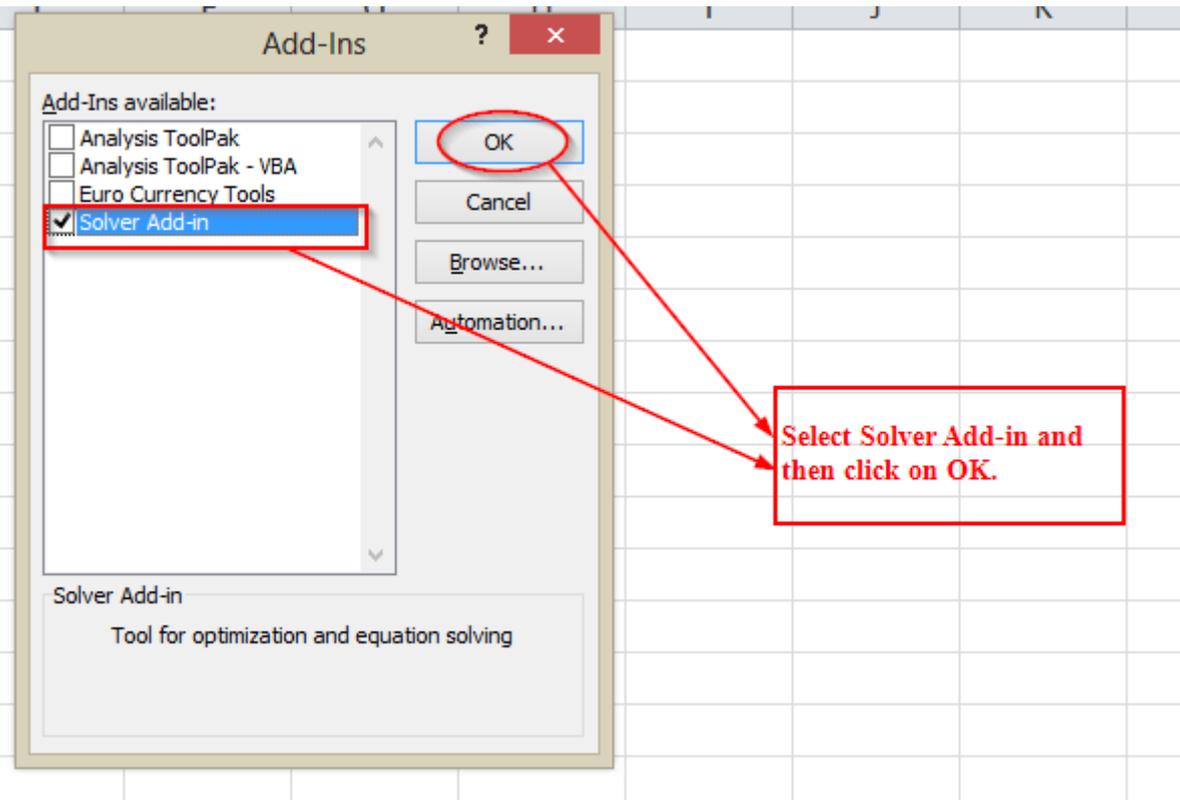
1. In Excel 2010, **Go to File Tab -> click Options**

2.In **Excel Options** Dialog box, click on **Add-Ins** option, select **Solver Add-In** and then click on **Go** button
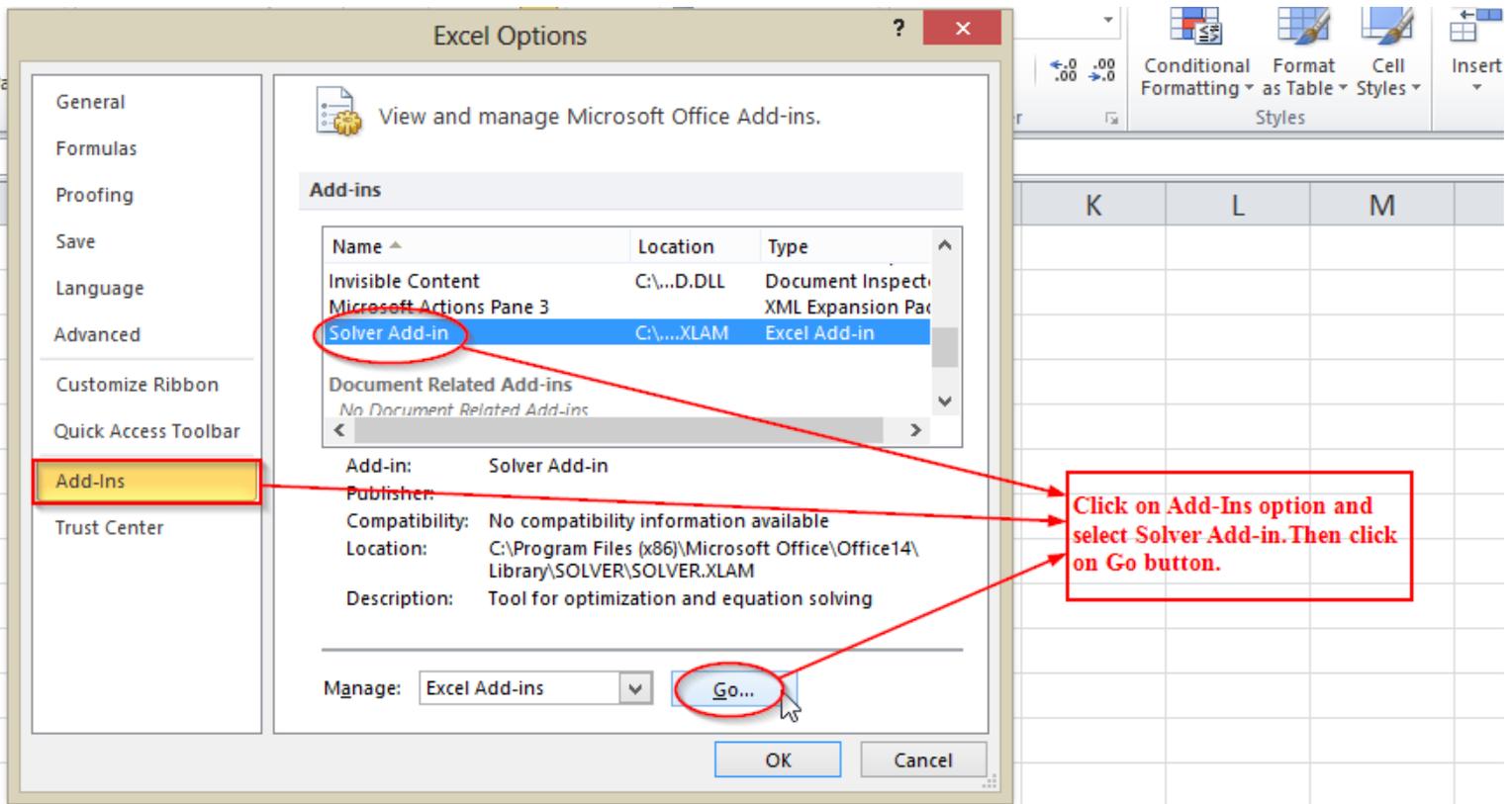
3. In Add-in dialog box, click on **SOLVER ADD-IN** and click OK.

4.Solver Add-in has been loaded in your computer. Click on **DATA** tab and you can see at SOLVER at extreme right.

Now click on Data Tab and you can see Solver option added to Data tab.
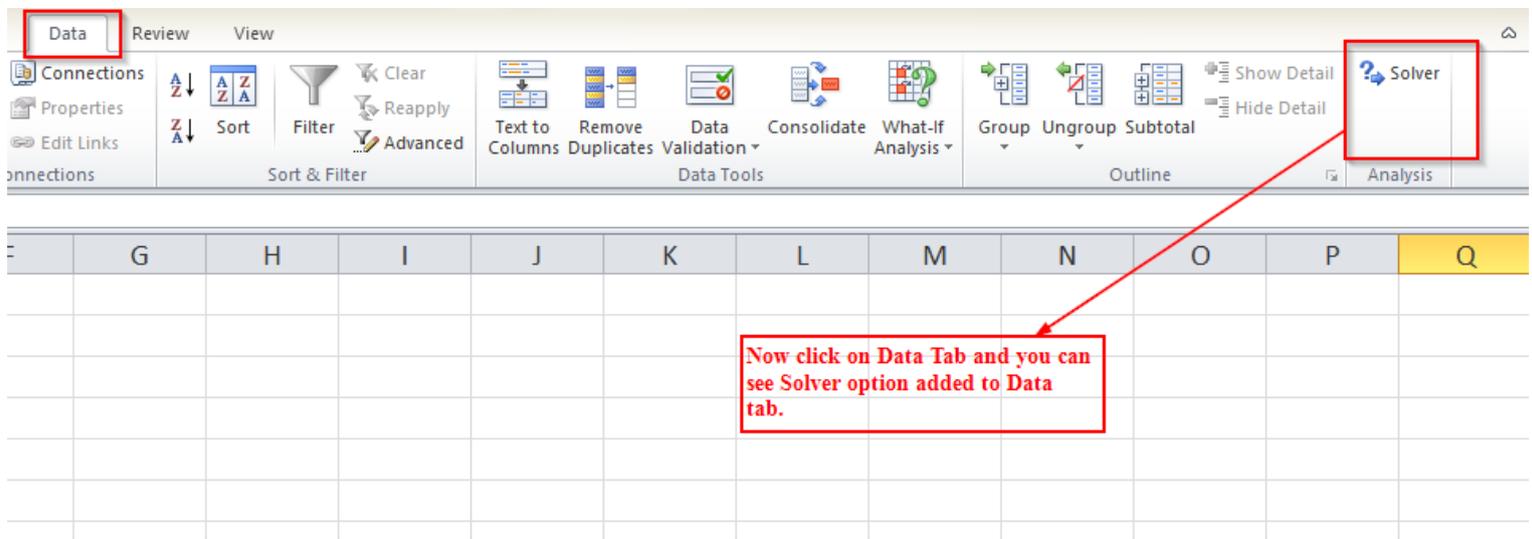
Using Solver add-in in excel:

Let us see an example to understand this .

Example:

Suppose we have the data shown below. We want to increase the profit and we want to find out what should be our new selling price in order to increase our profit. To solve this problem solver is used.

1. Formula to calculate profit %=((Selling price-Cost price)/Cost price)*100

C4 f_x =((C3-C2)/C2)*100

	A	B	C	D	E	F
1		TV	Fridge	Computer		
2	Cost price/unit	22000	17000	23000		
3	Selling price/unit	30000	20000	28000		
4	profit(%)	36.36	17.65	21.74		
5						
6						
7						
8						

See more: **How to Provide proper cell reference in Excel?**

2. Here we want to increase the profit of Fridge from 17.65 to 20.It means that our set_objective is $C$4 which is selling price of fridge. Provide set value in next Tab.

Then you need to specify criteria, based on which you would like to increase profit. Here we have two parameters: Cost price and selling price. Either we reduce our cost price or increase our selling price. So we have provided range $C$2:$C$3 in changing variables. You can also provide constraints, for example cost price should not be less than 17000 and selling price should not be greater than 20000.

3. Based on our data, Solver Add-in will calculate cost price and selling price keeping profit as 20%. You get the best solution from SOLVER. Click OK to keep Solver Solution or Cancel to try another solution.

4. By clicking OK, we have Solver solution in Excel sheet.

A	B	C	D	E	F
	TV	Fridge	Computer		
Cost price/unit	22000	16832	23000		
Selling price/unit	30000	20198	28000		
profit(%)	36.36	20.00	21.74		
		The new selling price is 20198 and cost price is 16832.			

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