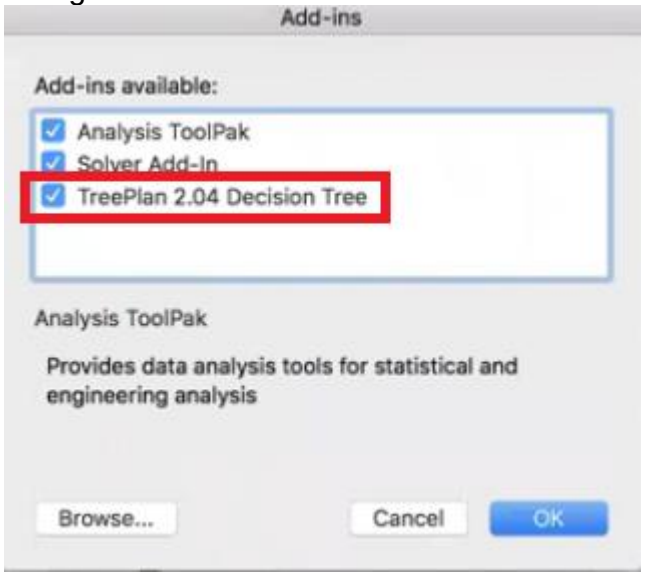
Create a Decision Tree
Excel Step-by-Step How-to

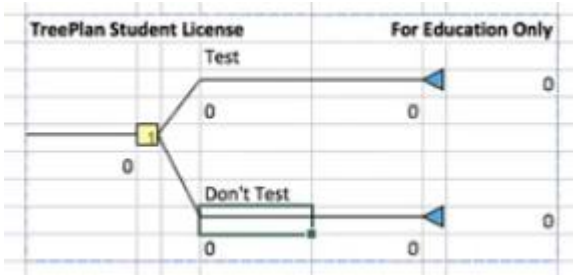
Instructions: Use this guide to create a decision tree using Excel.

Tool requirement: Visit treeplan-toolkit.com and download the tree plan toolkit.
Note: TreePlan is a third-party add-in for Excel that requires you to pay a licensing fee to Treeplan Software. If you plan to use TreePlan on a routine basis, you will need to purchase a license. Alternatives to TreePlan may exist.
Data requirement: Multiple instances of event probability
Sample Data: Oil drilling

Step	Instructions and Screenshots
1. Enable the tree plan toolkit.	Navigate to the Data tab and select Excel Add-Ins. Select the tree plan kit and click OK. 

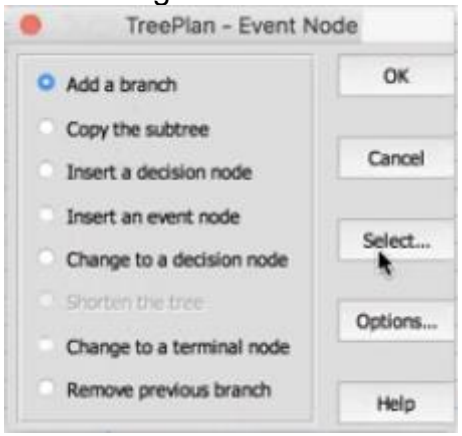
2. Begin the tree.

Press and hold and release Cmd + shift + T to create an initial tree. Update the labels to reflect your data. This example starts with “Test” and “Don’t Test.”



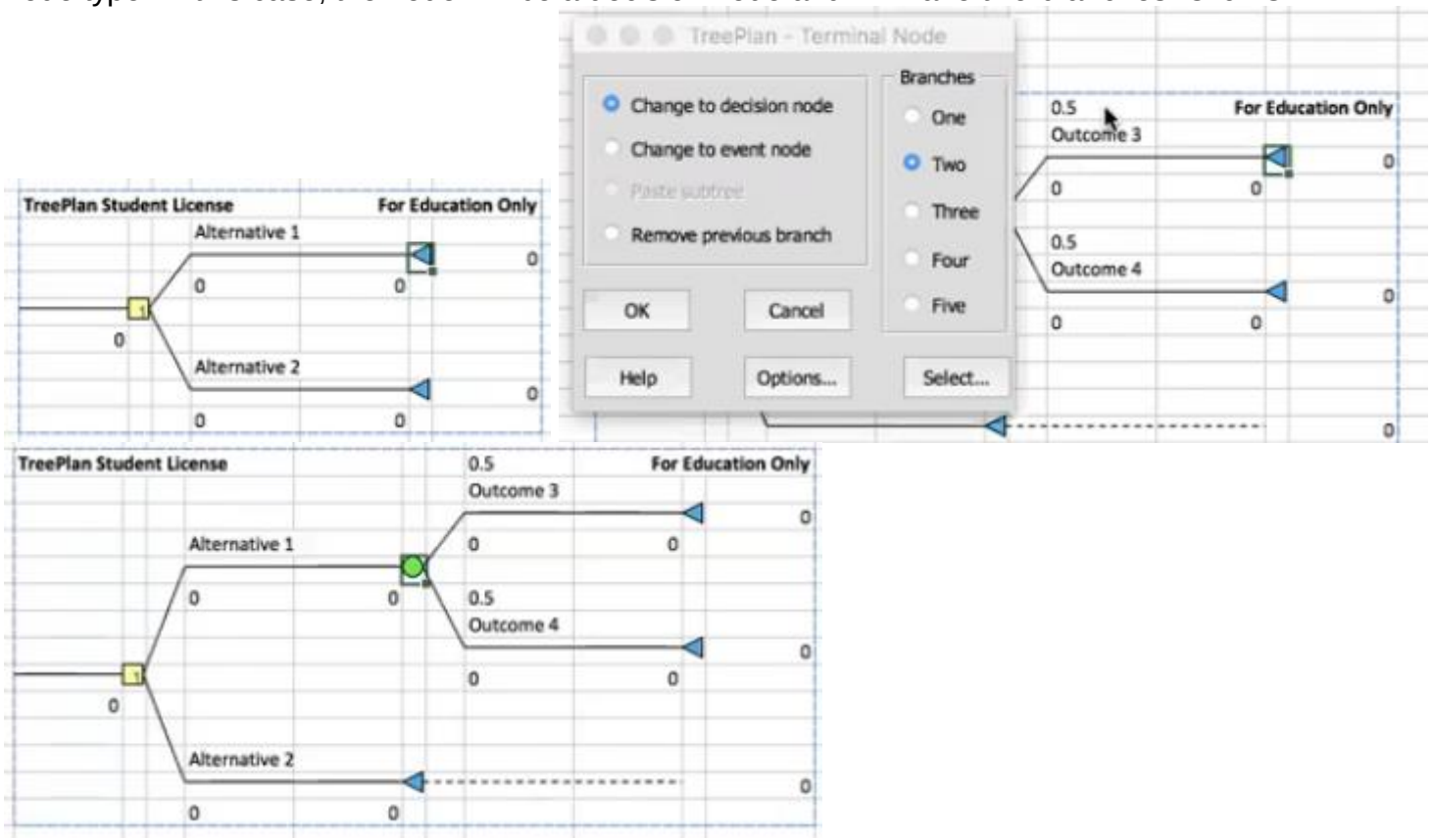
TIP: Edit any node at any time by…

… selecting the cell that the node is in and holding and releasing Cmd + Shift + T.



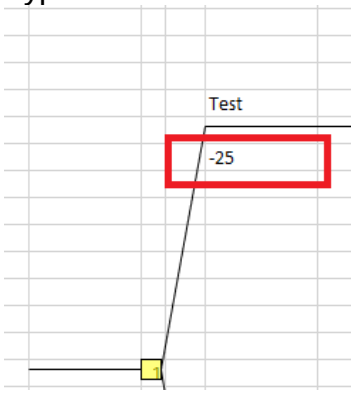
3. Branch the tree through editing nodes.

Select the cell the node is in that you would like to edit. Hold and release Cmd + Shift + T to change the node type. In this case, the node will be a decision node and will have two branches. Click OK.



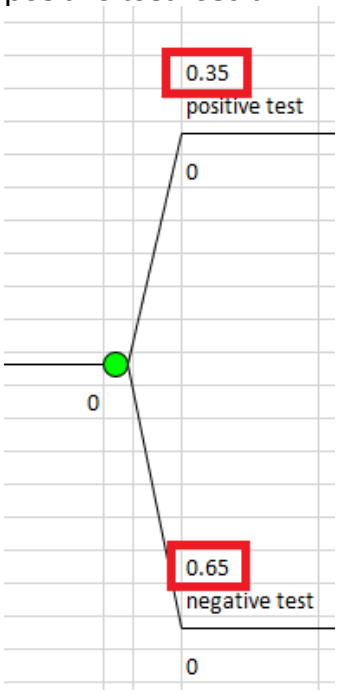
4. Populate the costs of the outcomes.

Type the associated cost in the cell below the label containing a zero.



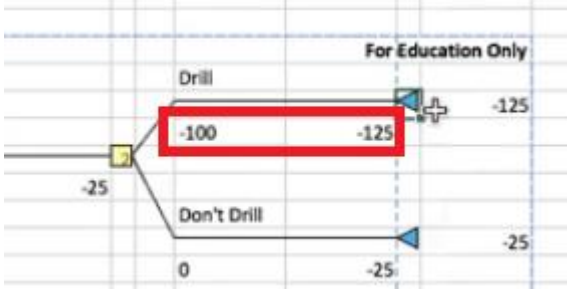
5. Populate the probability of the decision outcomes.

The probability of two branches from a decision will default to 50% each. Edit the probability by typing the probability of each outcome in the cell above the label. This example has a lower probability of getting a positive test result.



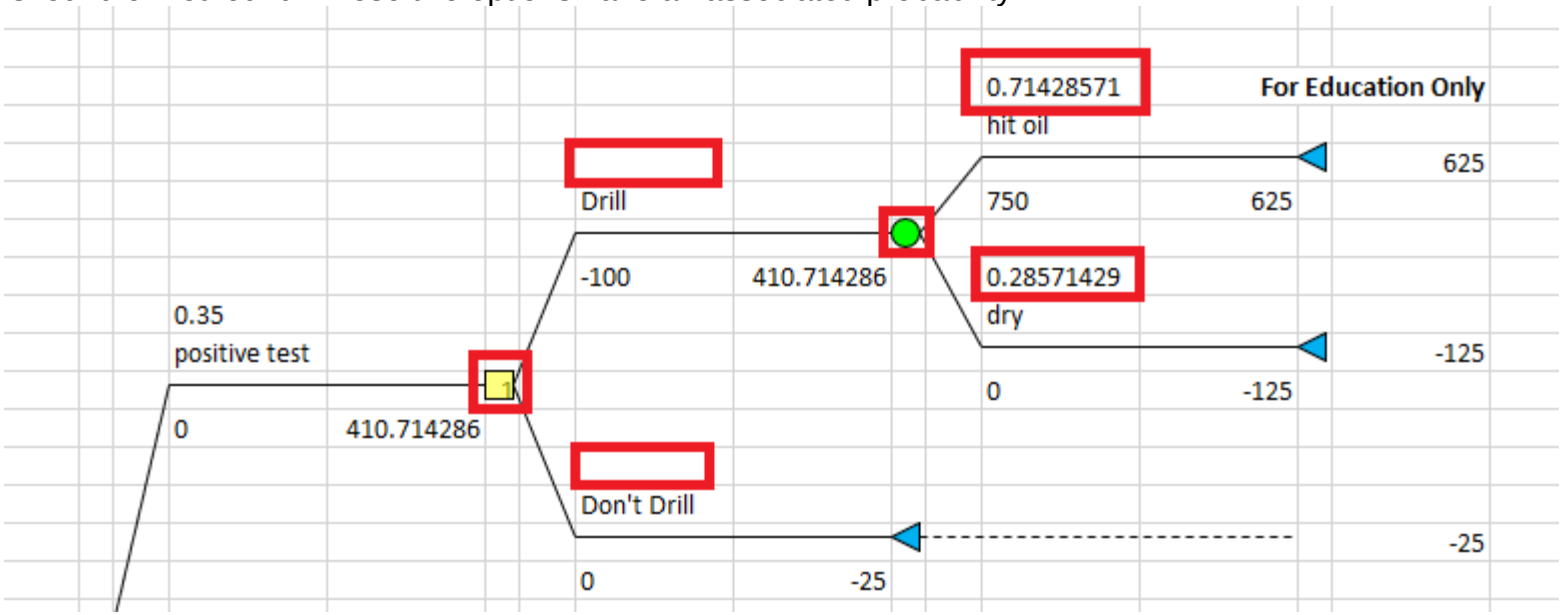
6. Note the total cost in the decision tree.

As you add costs to the decision tree, a running total for that path can be found in the cell to the right. So far, in this example, the total cost of this path is -125.



7. Note the difference between decision and event nodes.

The decision node is the yellow square. This example is the decision to drill or not. Note that there is no associated probability with the decision. The event node is the green circle. This example is the event that oil is found or not found. These two options have an associated probability.



8. Continue to build out your tree.

Continue until you have a populated all the events and decisions. Use the totals that are calculated at the edge of your tree to decide the path that is most optimal.