Answer on Question #42698, Economics, Finance

TCa = R2000, 70% chance of success.

TR = R11000 if successful, TR = R2000 if it not successful.
Without advertising - 50% chance of success, TR = R10000 if successful, TR = R1500 if not successful.

A decision tree is a decision support tool that uses a tree-like graph or model of decisions and their possible consequences, including chance event outcomes, resource costs, and utility. It is one way to display an algorithm.

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                                   (70%) revenue R11000
                                  /
                 with advertising
                /   (cost R2000)  \
               /                   (30%) revenue R2000
Decision tree
               \                        (50%) revenue R10000
                \                      /
                 without advertising
                                       \
                                        (50%) revenue R1500
```

Using provided probabilities and forecasted returns, we can calculate weighted returns:
TR (with advertising) = -2000 + 0.7*11000 + 0.3*2000 = R6300
TR (without advertising) = 0.5*10000 + 0.5*1500 = R5750

So, we advise the company to use advertising program in order to have higher returns.