Deterministic + Sensitivity Analysis

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Now that you've got your spreadsheet working, the question is what can you do with it? How can you perform different experiments? A spreadsheet is like a laboratory. Once it's running, you can do all sorts of thought experiments on it.

Turns out that there are a number of experiments the caliph wants you to do, because word has leaked out from the palace that the caliph is really interested in rocs. Now, what happens whenever management shows an interest in a problem? You've got it - they get inundated with proposals for research related to that problem. And it turns out that word as leaked out into Baghdad that the caliph's really interested in rocs, and so every scientific institution in Baghdad has come up with a proposal for things they would like to do given enough money. These have been sifted through, and out of the hundreds of proposals, the caliph has weeded it down to four, and I'm now going to run through with you the four proposals that have come through.

The very **first proposal** is to do a proper census, and the argument here in the proposal is Sinbad the Sailor says there are 703 rocs, but Sinbad isn't a proper scientist. We will do a proper census using the latest census techniques and come up with a really neat number. That's proposal number 1.

Proposal number 2 basically kicks off with the same argument, that Sinbad the Sailor isn't a real scientist and proposes to a very careful study of the number of nesting sites in Arabia. They are going to use a remote sensing and a model of whether or not a mountaintop constitutes a nesting site and count up the number of nesting sites.

The **third proposal** is to sample 100 nests and count the number of eggs and come up with a better estimate of the clutch size.

The **fourth proposal** is one looking at the number of silver bullets that are produced and used per century.

And it just so happens that all of these proposals cost exactly the same amount of money, a purse full of gold.

What the caliph wants you to do is to advise him on which of these proposals to fund. He would prefer to fund only one of them, but if you really can make a case for him to fund two, you should make that case.

So, over to you. Use your model in whatever way you like and see if you can use it to give any advice to the caliph on which of these proposals to fund.

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