Quality Sweater Company

Inputs:
Costs:
   Printing: $ 20,000.00
Variable
   Printing: $ 0.10   per catalog
   Mailing: $ 0.15   per catalog
   Reply envelopes: $ 0.20   per order
   Labor & Materials: $ 32.00   per order
Total Costs: $ 93,300   =B5+(B7+B8)*B13+(B9+B10)*B15

Catalogs Ordered: 100,000
Response Rate: 1.5%   <-dummy value
Total Orders: 1500   =B13*B14

Revenue
Average Customer Order: $ 40.00
Total Revenue: $ 60,000.00   =B15*B18
Total Profit: $ **(33,300)**   =B19-B11

The Quality Sweater Company sells hand-knitted sweaters. The company is planning to print a catalog of its products and undertake a direct mail campaign. The cost of printing the catalog is $20,000 plus $.10 per catalog. The cost of mailing each catalog (including postage, order forms, and buying names from a mail-order database) is $0.15. In addition, the company plans to include direct reply envelopes in its mailing and incurs a $.20 in extra cost for each direct mail envelope used by a respondent. The average size of a customer order is $40, and the company variable cost per order (primarily due to labor and material costs) averages about 80% of the order's value – that is $32. The company plans to mail 100,000 catalogs. It wants to develop a spreadsheet model to answer the following questions:

1. How does a change in the response rate affect profit?

2. For what response rate does the company break even?

3. If the company estimates a response rate of 3%, should it proceed with the mailing?

4. How does the presence of uncertainty affect the usefulness of the model?

a) Data Table

Response Rate:	Profit:
	$ (33,300)
1.5%	$ (33,300)
2.0%	$ (29,400)
2.5%	$ (25,500)
3.0%	$ (21,600)
3.5%	$ (17,700)
4.0%	$ (13,800)
4.5%	$ (9,900)
5.0%	$ (6,000)
5.5%	$ (2,100)
6.0%	$ 1,800
6.5%	$ 5,700
7.0%	$ 9,600
7.5%	$ 13,500
8.0%	$ 17,400

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Response Rate vs Profit (Quality Sweater Co.)