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1. Narrative on what is conjoint analysis, how it works, and its benefits.

Conjoint analysis is a way for companies to figure out what product features customers want most. It lets them design better products that people will want to buy.

First, we come up with different features a product might have. In our case, tv screen size, resolution, brand, etc. Then, we make a series of product concepts by combining all product features (in our case, all combinations of resolution, brand, etc.). Then, we ask customers about their preferences for these products, and we have them rate each one (we rated and ranked each product from 1-24). In our case, we used preference 24 as best and 1 as worst. Then, we figured out parts for each customer (some people might value lower prices over high resolution). We use these values to find the range and the importance that each attribute contributes to the total price. This helps us get an estimate of our optimal price, what our max profit will be at this point, and the market share at this given combination of features that create such a product.

The main benefits of conjoint analysis are:

- Helps companies make products people will statistically want.
- Figures out the most important product features.
- Companies can focus on what designs matter most to customers.
- Results in products more likely to succeed in the marketplace.
- Lower risk of failure results in less time, effort, and capital spent on unsuccessful products.
- Helps in determining how much an attribute contributes to a consumer's utility
- Market Shares, Cannibalization Rates, optimal price, price premium for brand names can be determined before the product launch.
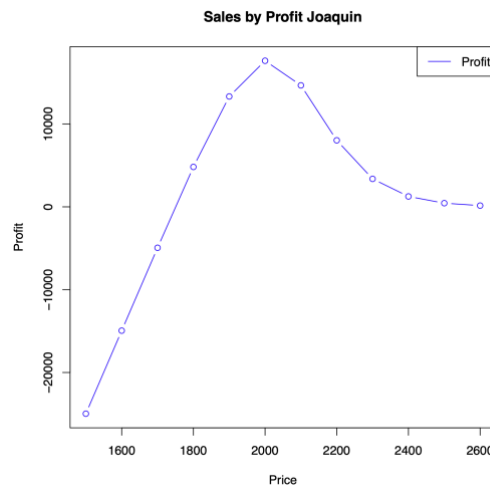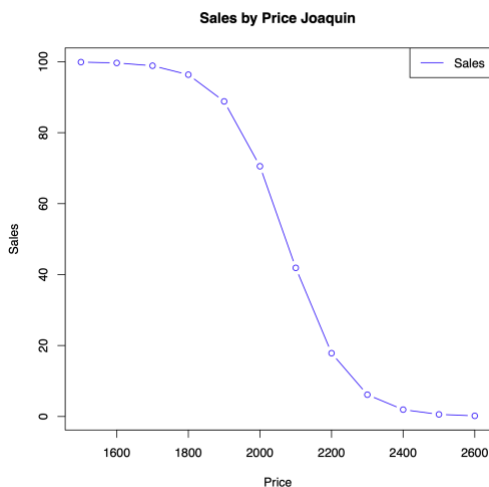
2. Describe your findings in a table of with rows containing the first 6 outputs and each team member in columns.

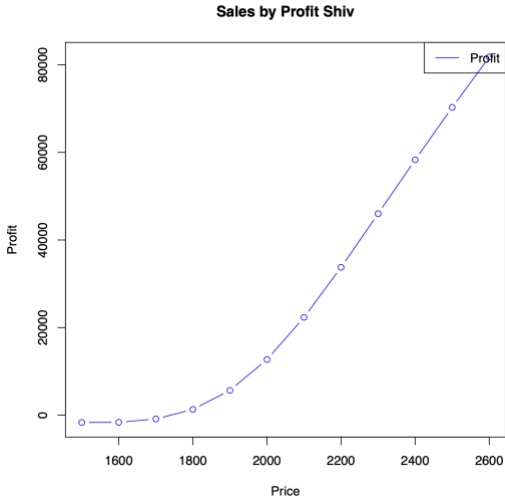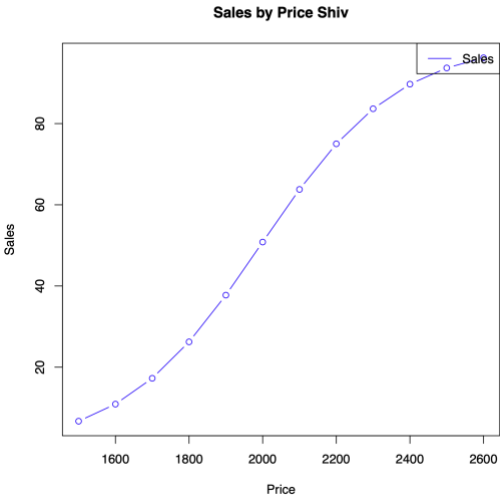|	A	B	C Joaquin	D Himani	E Shrunkhala	F Aayoshi	G Shiv
1	QUESTION	Subquestion	Joaquin	Himani	Shrunkhala	Aayoshi	Shiv
2	1. Partworths	(Intercept)	7.00	0.50	9.33	7.46	15.42
3		Screen 75 inch	2.00	10.00	1.75	4.13	-3.63
4		Screen 85 inch	1.00	14.00	3.25	9.75	-3.13
5		Resolution 4k	12.00	4.67	8.75	5.83	0.50
6		Sony	3.00	4.00	2.08	2.50	2.17
7		High Price	-6.00	-0.67	-8.75	-7.50	-4.00
8	2. Attr. Importance	Screen Size	53.85	60.00	14.23	38.11	35.22
9		Screen Resolution	10.26	20.00	38.32	22.80	4.86
10		Brand Name	20.51	17.14	9.12	9.77	21.05
11		Price	15.38	2.86	38.32	0.00	38.87
12	3. WTP	Screen 75 inch	166.67	7500	100	275.00	
13		Screen 85 inch	83.33333	10500	185.7143	650	
14		Resolution 4k	1000	3500	500	388.8889	62.5
15		Sony	250	3000	119.0476	166.6667	270.8333
16	4. Optimal Price	Value	2000.00	2500.00	1900.00	1800.00	2000.00
17	5. Max Profit	Value	17634.61	463.13	8431.60	337.73	8901.23
18	6. Market Share	Value	0.71	0.01	0.56	0.07	0.36

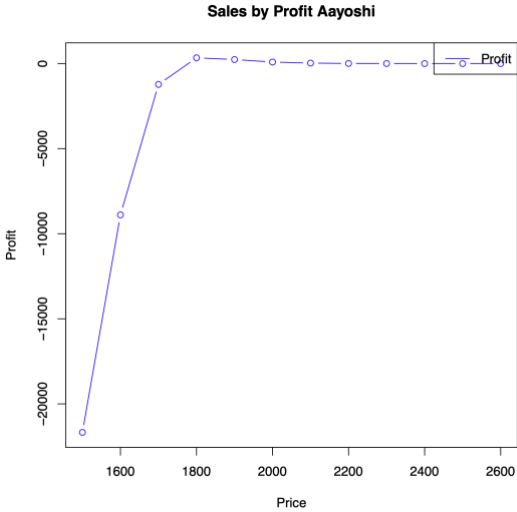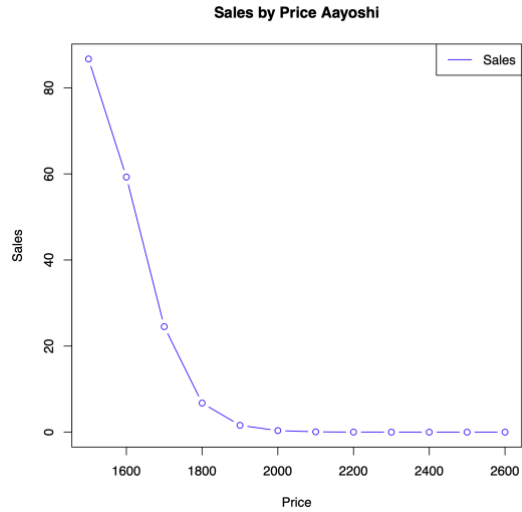In our model, we decided to use a TV with 75inch, 4k, non-Sony for a price of $1250.

Plots:

Joaquin:

Shiv:

Sales by Price Shiv
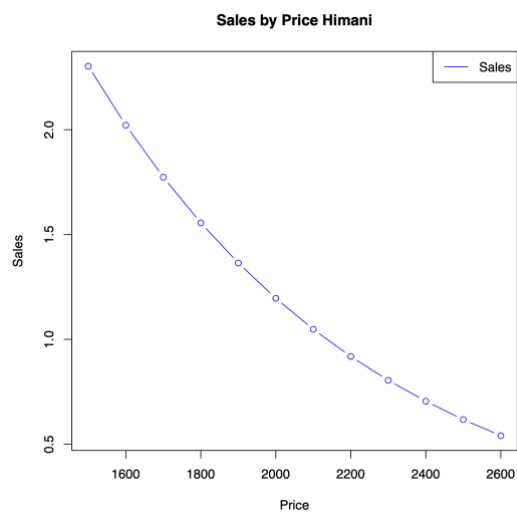

Sales by Profit Shiv

Aayoshi:

Sales by Price Aayoshi

Sales by Profit Aayoshi

Himani:

Sales by Price Himani

Sales by Profit Himani

Shrunkhala:

Sales by Price Shrunkhala

Sales by Profit Shrunkhala