**Cookie Lab**

***Problem***

* Which brand of cookie is the least expensive?
* Which brand of cookie is the best tasting?
* Which brand of cookie has the best appearances

***Materials***

* Three different cookies in bags marked A, B, & C.
* Three sheets of paper
* Scales
* Ruler
* Calculator

***Procedure***

1. Label one sheet of paper A, one B, and one C.

2. Place One cookie from each brand on the appropriate sheet.

3. Weigh each cookie and record your data in the quantitative data table.

4. Take one cookie of each brand and as a group record the qualitative data for the three brands of cookies. Rate the cookies on a scale from 1 to 3, 1 being the worst and 3 being the most desirable for each quality.

5. After finishing steps 1-4, get the price of the cookies.

**Cookie Lab – Worksheet**

***Complete this part before you begin.***

Form a hypothesis (claim) about each of the problems listed below.

* Which brand of cookie is the least expensive? A B C
* Which brand of cookie is the best tasting? A B C
* Which brand of cookie has the best appearances? A B C

**Quantitative Data Table (Evidence)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Brand*** | ***Mass of one Cookie*** | ***Mass of Bag*** | ***Average Mass (divide weight by the number of cookies in the bag)*** |
| ***A*** |  |  |  |
| ***B*** |  |  |  |
| ***C*** |  |  |  |

**Qualitative Data Table (Evidence)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Brand*** | ***Texture*** | ***# of Chips*** | ***Crispiness*** | ***Color*** | ***Mass*** | ***Size*** | ***Taste*** | ***Total*** |
| ***A*** |  |  |  |  |  |  |  |  |
| ***B*** |  |  |  |  |  |  |  |  |
| ***C*** |  |  |  |  |  |  |  |  |

***Analysis and Questions (Reasoning)***

1. Get a copy of the cost of each cookie. Determine which brand was the least expensive.

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2. Look back to your original hypotheses (claims).

a. Which hypotheses are supported by your data? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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b. Which hypotheses are refuted by your data? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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3. Which brand of cookie is the best tasting? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Which brand of cookie has the best appearance? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Which data, qualitative or quantitative, is most consistent with the rest of the class?

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6. Which type of data would you expect to be most accurate? Explain your answer.

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