Student Names

Candy Dispenser Analysis

Complete the following document. The completed document should be emailed to Mr. Hicks.

Find the mean, median, mode, and range for a candy dispenser that put out the following numbers of candies:

8, 3, 5, 3, 7, 5, 5, 3, 6, 3, 7

1. Mean:
2. Median:
3. Mode:
4. Range:

Find the mean, median, mode, and range for a candy dispenser that put number of candies:

8, 5, 8, 7, 4, 6, 8, 6, 8, 6

5. Mean:
6. Median:
7. Mode:
8. Range:
9. Did your Candy Dispenser dispense 4 – 8 pieces of candy? ***Indicate yes or no.***
10. Complete 10 trials for your candy dispenser. Enter your data in the table below:

Trial Number	# of pieces of candy dispensed

11. Using the data from the candy dispenser trials, complete a box plot or 5-number summary. After creating the box plot or 5-number summary, insert the data into the space below.

[Type a quote from the document or the summary of an interesting point. You can position the text box anywhere in the document. Use the Drawing Tools tab to change the formatting of the pull quote text box.]

12. If your candy dispenser put out different amounts of candy each time, like the example above, would customers be happy using the machine if they had to pay for the candy? Why or Why Not?

You have now made a new candy machine that dispenses one large bag of candy at a time. You are now going mass produce your new dispenser. You must convince a candy manufacturer that the price you will be charging for the dispenser is fair and it will not take long to pay for the machine .The

break even point is the number of bags of candy that must be sold to pay for the candy dispenser. This can be expressed by using the following algebraic formula:

X = Y ÷ Z ((Total number of candies that must be sold (X) = Dispenser Price (Y) ÷ Profit per Candy (Z)).

13. If the candy dispenser cost (**Y**) is $94, how many candies must be sold in order to break even (**X**) if the profit per candy (**Z**) was $1?

14. If your break even rate (X) is 330 bags of candy and the candy manufacturer's profit per bag of candy (Z) is $3, what price are you charging for the dispenser (Y)?