1. C (sample)
2. C (Right skewed)
3. False

|  |  |  |  |
| --- | --- | --- | --- |
|  | Data Type (a) | Numerical measure(b) | Graphical Method(c) |
| ID | Categorical Nominal |  |  |
| Age | Interval continuous data | mean/median | Histogram |
| Gender | Categorical nominal | count | Bar-chart |
| Opinion | Categorical ordinal | count | Bar graph |
| Time | Interval continuous data | mean/median | Histogram |
| Charge | Interval continuous data | mean/median | Histogram |
| Payment Type | Categorical nominal | count | Bar-chart |
| Prior Visit | Interval discrete | mean/median | Histogram |
| Blood Pressure | Interval continuous data | median/mean | Histogram |

Q5.

1. The length of time the shopper spends on the website.

A graph of a number of blue rectangular objects

Description automatically generated with medium confidence

This histogram illustrates that 4 individuals spent between 0 and 5 minutes on the website, while 13 individuals allocated 5 to 10 minutes, and the largest group, comprising 18 individuals, uses 10 to 15 minutes to the website. There are no people that spend between 25-30 minutes on the website. However, there are 2 people using the website between 30-35 minutes. By analyzing the histogram we can easily say that the majority of the people use the website for only 20 minutes. My Health care could make their website more engaging by adding offers, more choices which could increase the number of people in the website. Additionally, I believe My Health care could also focus on the customers who spend less time on the website as they are the majority of the buyers. The dataset statistics further support these observations: Minimum time spent: 3 minutes 1st Quartile (Q1): 8.775 minutes Median: 11.650 minutes Mean: 13.144 minutes 3rd Quartile (Q3): 16.200 minutes Maximum time spent: 32.900 minutes.

A graph of a number of pages viewed

Description automatically generated

This histogram portrays the distribution of page views across different customer groups. The largest segment, consisting of 11 individuals, visited the page 3-4 times, followed by 10 individuals who viewed it 2-3 times. The lowest number of page views, only by a single person, occurred in the 7-8 times category.

From this data, it may be beneficial for My Health care to consider focusing on the content or features of the page that attract the highest number of visitors (3-4 times) and explore ways to enhance and make it even more engaging. Additionally, understanding why the majority of customers view pages relatively few times might provide insights into user behavior and preferences, which could inform website improvements or marketing strategies. The dataset statistics further support these observations: Minimum pages viewed: 2 minutes 1st Quartile (Q1): 4.0 pages, Median: 5.0, Mean: 5.32, 3rd Quartile (Q3): 7.0, Maximum pages viewed: 10.0

A graph of a number of red squares

Description automatically generated

This histogram shows that the highest number of people out of the sample 50 which is 12 people spends 60-80 dollars. On the other hand there are not any people that spend 140-160 dollars. But there is also a person that spends 160-180 dollars. This information can be valuable for MyHealthcare in pricing and marketing strategies. They may want to focus on products or services within the 60-80 dollar range, as this appears to attract a significant number of customers. Additionally, they could investigate the reasons behind the lack of spending in the 140-160 dollar range and consider potential strategies to encourage more customers to spend within that bracket. The minimum amount spent is $17.84. The 25th percentile (1st Qu.) indicates that 25% of transactions are below $49.52. The median amount spent is $65.22, which means that half of the transactions are below this value. The average (mean) amount spent is approximately $69.44. The 75th percentile (3rd Qu.) shows that 75% of transactions are below $87.75. The maximum amount spent is $167.10.

We could learn the amount of the time spent by the user on the website, how many times the user views the pages as well as the spending pattern of the customer of My Healthcare. My health care could use this data in finding out the marketing strategies, knowing the user as well as the website improvement to engage the customers even more.

|  |  |  |  |
| --- | --- | --- | --- |
| Day | Transaction Count | Total Amount Spent ($) | Average Spent ($) |
| Fri | 11 | 933.17 | 84.83364 |
| Mon | 9 | 814.92 | 90.54667 |
| Sat | 7 | 378.74 | 54.10571 |
| Sun | 5 | 235.98 | 47.19600 |
| Thu | 5 | 271.83 | 54.36600 |
| Tue | 7 | 423.85 | 60.55000 |
| Wed | 6 | 413.68 | 68.94667 |

Customers typically make more purchases on Fridays, approximately 11 times, while they make fewer purchases on Sundays and Thursdays, only around 5 times each. The total amount spent is at its peak on Fridays, totaling $933.17, and at its lowest on Sundays, amounting to $235.98. However, when considering the average amount spent, Mondays have the highest average of $90.55 per transaction, whereas Sundays have the lowest average spending of $47.20 per transaction. MyHealthcare could potentially see benefits by increasing sales on Sundays and Thursdays.

|  |  |  |  |
| --- | --- | --- | --- |
| Browser | Customer | Total Spent ($) | Average Spent ($) |
| Firefox | 16 | 1204.54 | 75.28375 |
| Internet Explorer | 27 | 1716.24 | 63.56444 |
| Other | 7 | 551.39 | 78.77000 |

The most customers, 27 in total, prefer Internet Explorer and spend the most money, totaling $1716.24. The highest average spending occurs with other browsers at $78.77, even though there are fewer customers (7) using them. This suggests that some customers using other browsers spend more money, emphasizing the need to cater to this group.

1. A graph with numbers and dots

   Description automatically generated

This scatterplot illustrates the relationship between the time customers spend on the My Health Care website and the corresponding amount of money they spend. It appears that customers spending 5-15 minutes tend to spend less than $100, while a small group of customers spending 25-35 minutes tend to spend between $100 and $170.

The scatterplot shows that customers who spend more time on My Health Care's website tend to spend more money. Customers spending 25-35 minutes spend around 100-170 dollars, while those spending 5-15 minutes spend less than 100 dollars. This indicates a positive correlation between engagement and spending, and My Health Care can target different customer segments for tailored marketing and improvement strategies.

e. A graph with red dots

Description automatically generated

This scatterplot reveals a clear link between the number of pages viewed and the amount spent. It suggests that the more time people invest in browsing pages, the more money they tend to spend. While there aren't many individuals who view more than 7 pages, they tend to spend more. However, the majority, who view 4-6 pages, also spend relatively more than those who view fewer pages but less than those who view more than 8 pages.

F. A graph with green dots

Description automatically generated

The scatter plot reveals a direct connection between the number of pages viewed and the time spent on the website. In essence, the more pages a customer visits, the longer they tend to stay on the website. The data indicates that the highest number of times the page is viewed 10 times, the corresponding time is also highest which is between 30-35 minutes. However, a customer has also viewed the pages 10 times but only spent 9 minutes.