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Bivariat Data Project - Analysis PDF
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<u>Analysis</u>

The purpose of this study was to figure out if, as the number of books in a series goes up, does the average price per book go down? In this study, the sample size was books from the Half Priced Books store in North Olmsted whereas the population of interest was all books, either in a series or standalone. My method of collection was going to the previously mentioned store, finding a series or standalone book and, after making sure all the books were there, calculating the average price from those books or book.

There were some variables or weaknesses that I didn't account for in my initial proposal, like some books were definitely in better condition than others and this could affect the price of the book. To get rid of this weakness, I could change my sample from Half Priced Books to Barnes and Noble as their books are all in the same new condition.

<u>Descriptive Statistics</u>

	Minimum	Median	Maximum	Mean	St. Deviation
Average Price Per Book	6.060	10.035	19.990	10.692	2.867
Number of Books In Series	1.000	3.000	7.000	2.828	1.763

<u>Regression Analysis</u>
r=-0.270
r^2=7.29%
Regression equation = $\hat{y}$ = 11.93 - 0.4391x
The regression analysis shows that there is a weak negative linear correlation as the r=-0.270 meaning that there is a weak relationship between how many books are in a series and the price of each book. However, the fact that it is negative means that as the number of books go up, there is typically a slight decrease in the average cost per book. As the correlation coefficient is weak, it makes sense that the coefficient of determination is low as well. The regression equation shows that, as x, the number of books, goes up, the average price does go down, however slightly that may be.

<u>Conclusion</u>
These results cannot really be extended or broadened to another population of interest as the population of interest was already a general category. In regards to the original question, if there is a relationship between how many books in a series there are and the average price per book, I can conclude that there is a slight correlation between the two. However, there are so many other variables that I probably didn't even think to account for that could affect the price of each book.

Data

Number of Books In Series	Average Price Per Book
7	12.03
3	10.67
4.5	14.08
2	10.29
5	11.89
3	9.99
2	11.83
5	9.19
6	6.99
1	6.95
3	9.28
5	7.31
3	9.32
1	9.99
1	19.99
5	11.19
2	8.99
1	13.12
1	9.99
1	16.19
4	10.08
1	9.99

2	8.39
3	10.44
1	14.4
3	10.82
4	8.78
3	9.38
5	8.15
1	6.06
1	12.79
1	13.59