**Mathematics**

**School Based Assessment**





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# Title

An investigation in determining the most suitable hire purchase plan for the purchase of a new washing machine

# Introduction

During the COVID 19 pandemic both of my parents lost their jobs and as a result, they decided to start a small Laundromat business from Mondays to Saturdays. Therefore, they would need two washing machines. This would give us a considerable amount of output of sales for the business. The cost of the washing machine at Store A is $88,548.85. However, the cost at Store B is $73,198. My SBA would investigate the hire purchase plans available in both appliance stores that are the best option.

My objective is to compare both hire purchases plans with the cash price and choose the best one based on:

1. Interest
2. Time for repayment
3. Down payment
4. Monthly installments

# Method of Data Collection

Data was collected by interviewing my parents and finding out their interest in both stores.

1. The amount of money they have available for a down payment.
2. The amount of money they can afford in monthly installments.

To gather information on the different hire purchase plans, I visited the stores on February 6, 2021 to collect the necessary data.

# Presentation of Data

**Store Data**

Amount of Money Available for down payment = $10,000

Amount of Money Available for monthly installments = $5,500

**Hire Purchase Plans**

**Warranty on all plans was 12 months**

1. **Store A– Cash Price**

Washer/ Top Load/ 17 KG - $88,598.85

|  |  |
| --- | --- |
| Down Payment | $10,000 |
| Service Charges | $0 |
| Installments | $5,674 |
| Number of Months for Installments | 16 |

1. **Store B – Cash Price**

Frigidaire 17 KG Agitator Washer - $73,198

|  |  |
| --- | --- |
| Down Payment | $5,000 |
| Service Charges | $0 |
| Installments | $5,498 |
| Number of Months for Installments | 14 |

**For Store A**

**For Store B**

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# Analysis of Data

Store A

Interest = Total Cost – Cash Price

= $100,784 - $88,548.85

= $12,235.15

Interest % = Interest/Cash Price x 100

= $12,235.15/$88,548.85 x 100

= 13.8%

Store B

Interest = Total Cost – Cash Price  
 = $81,958 - $73,198

= $8,765

Interest % = Interest/Cash Price x 100

= $8,765/$73,198 x 100

= 12.0%

**Discussion of Findings**

The appliance store with the highest interest was found to be Store A, more than the cash price. The down payment however was the exact limit of money available for my parents for the down payment on the washing machine. Additionally, the monthly installments required for this plan is $5,674. This is higher than the money my parents said they have available for paying on installments. This plan is not the best as it would make my parents on the edge of their financial restraints.

Another plan to consider is from Store B. The appliance store was found to be with the lowest interest, more than the cash price. The down payment was below the limit of money available for the down payment on the washing machine. Additionally, the monthly installments needed for this plan is $5,498. This is lower than the money they have available for paying on the installments. This plan is most suitable plan because it is in their financial range and it is overall the lowest.

**Conclusion**

The most suitable appliance store for my parents is Store B. The down payment and installment are within my parents’ financial range. Store B also has the lowest interest of 12% and the fastest repayment of 14 months.

# References

*CSEC Math Tutor*. (n.d.). Retrieved from https://www.csecmathtutor.com/

Springer, K. (YouTuber). (2020). *CSEC Maths SBA (Done Live) - Hire Purchase [Part 1]* [video].