**Market Analysis Report for National Clothing Chain**

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Answer the following five questions as a summary of the Project.

1. What is the correlation (R2 value) between sales and income?

**Fomula:** Predicted Income = 72.433 Average Sales in 6 month + 72,638

Correlation(R2) = 0.78

1. What is the correlation (R2 value) between customer ratings and product return rate?

**Fomula:** Predicted Return Rate = -0.011 Customer Ratings + 0.054

Correlation(R2) = 0.69

1. What are the linear regression formulas to predict customer income from customer sales?

Please refer 1st question

1. Which customer do you predict has the highest income?

The highest income Customer from linear regression model is below.

|  |  |  |  |
| --- | --- | --- | --- |
| Customer ID | First Name | Last Name | Predicted Income($) |
| JLit30836 | Jon | Little | 452911.46 |

1. Which product will be advertised the most?

Most advertised product will be Sweater.

The two conditions, Predicted Income($) and Max Purchase in a day($), determined the items to be recommended for each customer. See table below for details.

**Table for determining which items to recommend**

|  |  |  |  |
| --- | --- | --- | --- |
| X:Predicted Income($) | Y:Max Purchase in a day($) | | |
| Y<100 | 100≦　Y　≦1000 | Y≧1,000 |
| X<80,000 | Shirt | Sweater | |
| 80000≦X<140,000 | Sweater |
| 140,000≧X | Sweater | Leather Bag |