

Car Loan Payment Project

By Ivan

Car

Dealership Name	Dealership Address	Website
OpenRoad Toyota	3166 St. Johns Street Port Moody BC, V3H 2C7	https:// openroadtoyotaportmoody.com/? utm_source=google&utm_mediu m=organic&utm_campaign=gmb listing

Make	Model	Year
Toyota	2021 Toyota Corolla	2020

Condition	Price
New	\$25,595

The first reason why I choose this car because of its outward appearance. It uses a matte black finish that I personally really appreciate. Another reason that I choose this car is because of its useful features designed such as a wireless charging for phones, and an extra usb charge indicator. The most important reason that leads me to chose this car is its safety system. Not like most cars on the market, 2021 Toyota Corolla has a perfect safety rating of 5/5 that is rated by NHTSA. In my opinion, safety is the most considerable feature when looking for a car.

Scenario 1

Down payment of 10% over 2 years

Price of the car: \$25,595

Down payment: $25,595 \times 10\% = \$2,559.5$

Principal: $25,595 - 2,559.5 = \$23,035.5$

Loan Amount

$$\begin{aligned} A &= 23035.5 \left(1 + \frac{0.032}{12}\right)^{(12)(2)} \\ &= 23035.5 \left(\frac{12.032}{12}\right)^{24} \\ &= 23035.5 (1.06600159082) \\ &= 24555.88 \end{aligned}$$

Interest: $24555.88 - 23035.5 = \$1,520.28$

Monthly payment: $24555.88 / 24 = \$1,023.16$

Total cost: $2559.5 + 24555.88 = \$27,115.38$

Scenario 2

Down payment of 10% over 5 years

Price of the car: \$25,595

Down payment: $25,595 \times 10\% = \$2,559.5$

Principal: $25,595 - 2,559.5 = \$23,035.5$

Loan Amount

$$\begin{aligned} A &= 23035.5 \left(1 + \frac{0.032}{12} \right)^{(12)(5)} \\ &= 23035.5 \left(\frac{12.032}{12} \right)^{60} \\ &= 23035.5 (1.17326099279) \\ &= 27026.65 \end{aligned}$$

Interest: $27026.65 - 23035.5 = \$3991.15$

Monthly payment: $27026.65 / 60 = \$450.44$

Total cost: $2559.5 + 27026.65 = \$29586.15$

Scenario 3

No down payments over 2 years

Price of the car: \$25,595

Down payment: 0

Principal: \$25,595

Loan Amount

$$\begin{aligned}A &= 25595 \left(1 + \frac{0.032}{12}\right)^{(12)(2)} \\&= 25595 \left(\frac{12.032}{12}\right)^{24} \\&= 25595 (1.06600159082) \\&= 27284.42\end{aligned}$$

Interest: $27284.42 - 25,595 = \$1689.42$

Monthly payment: $27284.42 / 24 = \$1136.85$

Total cost: $0 + 27284.42 = \$27284.42$

Scenario 4

No down payments over 5 years

Price of the car: \$25,595

Down payment: 0

Principal: \$25,595

Loan Amount

$$\begin{aligned}A &= 25595 \left(1 + \frac{0.032}{12}\right)^{(12)(5)} \\&= 25595 \left(\frac{12.032}{12}\right)^{60} \\&= 25595 (1.17326099279) \\&= 30029.62\end{aligned}$$

Interest: $30029.62 - 25,595 = \$4434.62$

Monthly payment: $30029.62 / 60 = \$500.49$

Total cost: $0 + 30029.62 = \$30029.62$

Final analysis

If I was to buy a car, I will choose scenario 2 (Down payment of 10% over 5 years), due to the reason that it has the lowest monthly payment. By my living experiment and from observation of other adults (such as my parents), I found out that it is important to always have enough cash to consume or invest. I will not want to pay the majority of my earning on my car loan every month. Also, I have the confidence to invest and earn a lot more money using the money I saved from my monthly loan, incidentally covering the extra interest that I had paid. In conclusion, paying less loan every month will make my life way easier and might even help me profit more. Above is the reason of why I choose scenario 2.