

Example 4

Elwood needs a loan to buy a new car. The price of the car is \$17 995 after taxes. He will make a \$2000 down payment. The dealership offers him a 5-year loan at 4.5% interest. The amortization rate for this loan is \$18.74 per \$1000.

$$\begin{aligned} \text{TOTAL Loan} &= 17995 - \text{Down payment} \\ &= 17995 - 2000 = \boxed{\$15995} \end{aligned}$$

- a) Calculate Elwood's monthly loan payment.

$$\begin{aligned} \text{Monthly loan payment} &= \text{Total Loan} \times \text{Amortization Rate} \\ &= 15995 \times \frac{18.74}{1000} \\ &= \boxed{\$299.75} \end{aligned}$$

- b) Calculate the amount of interest Elwood will pay on his first month's payment.

$$\begin{aligned} \text{(First month) Interest} &= \text{Principal} \times \text{interest rate} \times \text{time} \\ &= 15995 \times 0.045 \times \frac{1}{12} \end{aligned}$$

$$\text{Interest} = \underline{\underline{\$59.98}}$$

- c) State at least three ways that Elwood could reduce the amount of interest he will pay over the life of his loan.

1. Shorten the amortization time or period.
2. A larger down payment.
3. Lower interest rate.

Example 5

Kavita is looking to buy a new car. A bank offers her a 4-year loan at 4.75%. The monthly payment on the loan will be \$505.78.

- a) Kavita cannot afford to pay that much every month. State at least two ways that Kavita could lower her monthly payment.

1. Get a lower priced car
2. Choose a longer amortization period.

- b) State the effect that lowering her monthly payment would have on the total interest paid for the loan.

1. Total interest paid will increase.