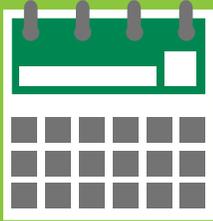


Can You Afford a Car Payment?

CALCULATING THE COST OF AN AUTO LOAN



LOAN TERM

The amount of time that you will be making monthly payments in order to pay off the loan. On average, most Americans choose a loan term between 24 - 72 months.

ANNUAL INTEREST RATE

This is the interest rate you that will be added to your initial "principal" or loan amount. This rate does not include the additional fees or interest accrued to the day of your first payment.



TIME REMAINING ON LOAN

The amount of time (months) you have left on your car loan. Calculated by subtracting the total number of months on your loan by the number of months you have made payments on.

ADDITIONAL MONTHLY PAYMENT

This is the additional amount you add to your monthly car payment. By paying more each month, you're lowering your principal balance. In turn, you can expect to pay off your car faster depending on how much you contribute on a consistent basis.



LOAN AMOUNT

The overall amount that has been approved by the bank to cover the cost of the vehicle. This is not your "remaining balance" or the "principal balance". The average price of a new car in the USA as of 2019, was \$37,185.

ANNUAL PERCENTAGE RATE

Also referred to as APR, is the annual rate (%) charged over the term of a loan. Loans are offered with two different types of APR, fixed or variable. The rate is determined by the consumer's credit score, term length of the loan, age of the car being financed, and other factors.



$$\text{Monthly Payment} = P \times \frac{r(1+r)^n}{(1+r)^n - 1}$$

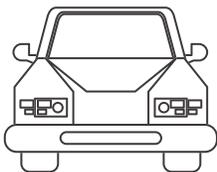
P = Loan Amount
 r = Interest Rate Per Period
 n = Loan Term

Loan Information for Example

$P = \$20,000$ $r = 4.21\%$ $n = 5$ years (60 months)

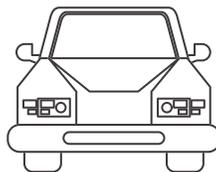
- Step 1** Divide the annual interest rate by 12, the number of payments that will be made per year.
 Example: $4.21 / 12 = 0.35083$
- Step 2** Convert 'r', loan term per month, into a decimal by multiplying by 100.
 Example: $0.35083 \times 100 = 0.0035083$
- Step 3** Add 1 to the number calculated in step 2.
 Example: $0.0035083 + 1 = 1.0035083$
- Step 4** Using the result from step 3, raise the result to the 'n' (loan term converted into months) power.
 Example: $1.0035083^{60} = 1.2338379$
- Step 5** Subtract 1 from the result from step 4.
 Example: $1.2338379 - 1 = 0.2338378$
- Step 6** Divide the monthly interest rate, 'n' calculated in step 2, by the result from step 5.
 Example: $0.0035083 / 0.2338378 = 0.0150031$
- Step 7** Add the monthly interest rate from step 2 to the result from step 6.
 Example: $.0035083 + 0.0150031 = 0.0185114$
- Step 8** Multiply the amount borrowed, 'P', by the result from step 7 to determine the monthly payment.
 Example: $20,000 \times 0.0185114 = \370.23

Comparing Auto Financing Options



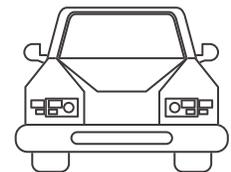
Loan Amount: \$35,000
 Loan Term: 5 years
 Annual Interest Rate: 4.0%

Monthly Car Payment:



Loan Amount: \$25,000
 Loan Term: 5 years
 Annual Interest Rate: 4.2%

Monthly Car Payment:



Loan Amount: \$30,000
 Loan Term: 4 years
 Annual Interest Rate: 3.8%

Monthly Car Payment:

Presented by:

