

Buying a new car

Advantages

- ① You own it once it is paid for.
- ② No monthly payments after it is paid off.
- ③ Better interest rates (usually)

④ Sell it back when you trade it in.

Disadvantages

- ① Higher monthly payment than leasing, because you are paying for the whole thing.
- ② You pay for repairs if you keep it longer than the "bumper to bumper" warranty.

Buying a used car

Advantages

- ① May be the only way to own a car if a new car is too expensive.
- ② Tremendous selection to choose from.

Certified used car:

The dealership has performed maintenance and inspected the vehicle to give you comfort that it is a "good" car. It comes with a warranty. It will usually cost more than buying a used car from an individual.

Disadvantages

- ① Higher interest rate charged than to purchase a new car.
- ② Many used cars are sold "as-is" or with a shorter warranty. ("Bumper to bumper" warranties are usually transferable until they expire).

You pay for repairs once the car is out of warranty. You pay for repairs if the car breaks one hour later if there is no warranty.

Repair or replace:

1) The 50% rule - if the cost of a needed repair is greater than 50 percent of the car's resale value than it is time to buy a different car.

Spend \$2,000 on a major repair or put down a down payment and take a loan out for a new car? There is no simple answer what to do.

Buying a Car

① (Negotiated Price + Sales Tax) Total Cost

↓
② Less: Down payment

↓
③ = Amount Financed

↓
④ Calculate monthly payment

⑤

Find total repaid
on loan
(Monthly Payment \times # Payments)



⑥

Calculate Finance charges
(Total Repaid on loan - Amount
financed)

⑦ Total Cash Paid for the
Car

(Downpayment + total repaid
for the loan)

⑧ Net cost ↓ of ownership
(Total cash paid for the car
- trade in)

Buy a car for 25,000
MSRP is 28,000

You put 20% down
before taxes. Finance
the balance at 6.5%
APR for 48 months.

Sales tax of 6% is added to the final purchase price of the car.

The salvage value will be 35% of the MSRP.

*Salvage value = trade in

1. What is the total cost of the car?
2. What is the amount of the downpayment?
3. What is the loan amount if you purchase the car?
4. Determine the monthly car payment.
5. What is the interest you paid on the loan?
6. What is the salvage value?
7. How much will you have paid for the car over the 48 months?
8. At the end of 48 months you sell the car for 35% of the MSRP. What is the net ownership cost to you for the 4 years you owned the car?

① What's the total cost of the cert?

$$25,000 + .06(25,000) = 26,500$$

② What's the downpayment?

$$25,000 \times .2 = 5,000$$

③ What is the loan amount you borrowed to purchase the car?

Cost + sales tax - down payment

total cost of car

$$25,000 + (.06)(25,000) - (.2)(25,000)$$

$$25,000 + 1,500 - 5,000 =$$

\$21,500 Loan

④ Calculate the monthly car payment:

$$PMT = \frac{A(i)}{1 - (1+i)^{-n}}$$

$PMT =$ payment per period

$A =$ the loan amount

$i =$ the interest rate per payment period

$n =$ the total # of payments

Loan was \$21,500 at 6.5% for 48 months.

$$PMT = 21,500 \left(\frac{0.065}{12} \right)$$

$$\frac{1 - \left(1 + \frac{0.065}{12} \right)^{-48}}{116.46}$$

$$\frac{1 - .77159}{116.46} = \$509.87 \text{ per month}$$

⑤) What is the interest you
 paid on the loan for the
 car?

⑤
 $\text{Monthly Payment} \times \# \text{ months} - \text{loan amount}$

$$\$509.87 \times 48 - \$21,500$$

⑥

$$\text{Total loan payments} - \text{Loan}$$

$$\$24,473.76 - 21,500 = 2,973.76$$

⑦ At the end of 4 years, you sell the car for 35% of the MSRP. What is the salvage value?

$$.35 \times 28,000 = 9,800$$

⑧ What is the total amount paid for the car over 4 years?

(How much cash did you pay out?)

Downpayment + total paid on the loan

$$5000 + 509.87(48)$$

$$5000 + 24473.76$$

$$= 29473.76$$

⑧ What is the net cost of ownership for the 4 years you owned the car?

$$29473.76 - 9800$$

$$= 19673.76$$

You buy a Corolla with an MSRP of \$21,234. You negotiate a final price of \$20,399 and make a down payment of 13 percent after sales taxes of 4.8%.

The annual interest rate for a loan or lease is 7.35% APR over 4 years. Payments are made monthly.

Remember, Sales tax is 4.8% of the final price if you purchase the car.

The salvage value is 47% of the MSRP.

- 1. What is the total cost of the car?
 - 2. What is the amount of the downpayment?
 - 3. What is the loan amount if you purchase the car?
4. Determine the monthly car payment.
 5. What is the interest you paid on the loan?
 6. What is the salvage value?
 7. How much will you have paid for the car over the 4 year period?
 8. At the end of 4 years you sell the car for 47% of the MSRP. What is the net ownership cost to you for the 4 years you owned the car?

① 21378.15 cost

② 2779.16 downpayment

③ 18598.99 loan

④ 448.40 monthly payment

⑤ 2924.21 interest

⑥ 9979.98 salvage value (trade-in)

⑦ 24,302.36 total paid

⑧ 14322.38 net cost of ownership

