

Worksheet 7-6: Buying a Car, Used or New

Used cars are less expensive to buy and less expensive to insure. A good used car will cost a lot less than a new model of the same car. New cars can be bought or leased. Depending on your situation, there are advantages to buying or leasing. The initial costs for obtaining a new vehicle are usually greater than those for obtaining a used vehicle.

The following words or abbreviations are commonly seen in advertisements for vehicles. Match these words or abbreviations on the left to their most appropriate meanings on the right.

- | | |
|---------------|-----------------------------|
| 1. 5-spnd | _____ front-wheel drive |
| 2. auto | _____ 5-speed |
| 3. obo | _____ air conditioning |
| 4. PS | _____ 170 000 km |
| 5. 170K | _____ power windows |
| 6. AWD | _____ automatic |
| 7. e-test | _____ power steering |
| 8. PB | _____ power (door) locks |
| 9. cert | _____ year 2000 model |
| 10. PW | _____ or best offer |
| 11. A/C | _____ emission test |
| 12. FWD | _____ has all extra options |
| 13. loaded | _____ power brakes |
| 14. PL or PDL | _____ all-wheel drive |
| 15. '00 | _____ certified |



2000 HONDA ACCORD LX, 37K,
 4 Door, White w/tan leather interior,
 Cruise Control, Dual Airbag, A/C, PWR
 Steering, PWR Mirrors and Windows,
 FM/CD, Alarm System, \$13500 OBO
 Contact : Marshall (555) 615-9859

Buying or leasing a new vehicle is a big expenditure, and often involves making a down payment. A down payment is the initial payment due upon the purchase or lease of an item, such as a car or a house. Leasing a new vehicle is basically entering into a long-term rental agreement which involves making a series of regular payments at equal intervals of time over the term of the agreement. You drive the car but you do not own it.

Comparing Used Cars:

1. Explain why three identical model vehicles of the same age, found in the classified advertisements of a local newspaper, could have three very different prices.

Buying a New Vehicle:

2. A local dealership is selling a new compact car for \$17 995 plus taxes (5% GST and 8% PST). The dealership offers financing at 4.9% annual interest rate, compounded monthly, over four years. You have saved \$3000 for a down payment. You will finance the rest.

(a) What is the after-tax cost or total cost of the car?

$$\text{Total cost} = \text{Selling price} + \text{Selling price} \times 0.13$$

or

$$\text{Total cost} = \text{Selling price} \times 1.13$$

(b) What is the amount to be financed or principal of the car loan?

(c) What will be your monthly payment for financing the car?

$P =$ $i =$ $n =$

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

(d) What is the total amount paid for the car?

$$\text{Total amount paid} = \text{Down payment} + \text{Loan repayment (Sum of monthly payments)}$$

(e) What is the total interest paid for financing the car?

Leasing a New Vehicle:

3. To lease a new car selling for \$24 000, a customer agrees to pay \$1000 down payment and to make 48 monthly payment of \$369.

(a) Calculate the total cost of leasing the vehicle.

$$\text{Total Cost of Leasing} = \text{Down payment} + \text{Monthly payments (Sum of monthly payments)}$$

(b) Calculate the average cost per month over the term of the lease.

Buying a Used Vehicle:

4. Vehicles purchased from a private seller (e.g. your neighbour) are not subject to GST. Only PST is charged when you change the vehicle's ownership papers. A used car is advertised for sale in a local newspaper for \$4500.

(a) Determine the total cost of the vehicle with 8% PST.

$$\text{Total cost} = \text{Selling price} + \text{Selling price} \times 0.08$$

or

$$\text{Total cost} = \text{Selling price} \times 1.08$$

(b) Determine the monthly payment for a \$5000 loan at 8% annual interest, compounded monthly for two years.

$P =$

$i =$

$n =$

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

5. Calculate the after-tax cost of the following vehicles available at a local car dealership.

(a) a two-year-old minivan selling for \$22 995

(b) a new sports car selling for \$36 250

6. Calculate the after-tax cost of the following vehicles purchased from a private seller.

(a) a nine-year-old compact car for \$2500

(b) a 12-year-old mid-size diesel car for \$4200

7. To finance a new compact car, \$15 000 is borrowed for five years at 9.25% annual interest, compounded monthly.

(a) Determine the monthly payment.

$P =$

$i =$

$n =$

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

(b) Calculate the total amount paid to the financial institution for the car loan.

(c) Calculate the total amount of interest paid over the term of the loan.

8. To finance a used car, \$8500 is borrowed for four years at 8.5% annual interest, compounded monthly.

(a) Determine the monthly payment.

$P =$

$i =$

$n =$

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

(b) Calculate the total amount paid to the financial institution for the car loan.

(c) Calculate the total amount of interest paid over the term of the loan.

9. Calculate the total cost of each new car lease.

(a) a luxury sedan worth \$72 000 leasing for \$7500 down and 39 monthly payments of \$ 899

(b) a car worth \$18 000 leasing for \$1000 down plus 36 monthly payments of \$299

10. To lease a new car worth \$30 000, a customer agrees to pay a \$1000 down payment and 48 monthly payments of \$525.

(a) Calculate the total cost of leasing the vehicle.

(b) Calculate the average cost per month over the term of the lease.

(c) After 48 months, the customer will have to return the vehicle to the dealership. What options do you think that the customer would have at that point?

(d) If instead, the customer buys the car with \$1000 down and finances the rest of the cost at 6% annual interest, compounded monthly for four years, determine the total amount paid for the car.

Answers: **1.** different mileage, condition, or damage; **2.** (a) \$20334.35, (b) \$17334.35, (c) \$398.41, (d) \$22123.68, (e) \$1789.33; **3.** (a) \$18712, (b) \$389.83; **4.** (a) \$4860, (b) \$226.14; **5.** (a) \$25984.35, (b) \$40962.50; **6.** (a) \$2700, (b) \$4536; **7.** (a) \$313.20, (b) \$18792, (c) \$3792; **8.** (a) \$209.51, (b) \$10056.48, (c) \$1556.48; **9.** (a) \$42561, (b) \$11764; **10.** (a) \$26200, (b) \$545.83, (c) buy the car or lease a new car, (d) \$38087.68 (Total cost \$33900, P = \$32900, PMT = \$772.66).

Dissecting A Car Ad

2001 Ford F-150

You Do The Math. The F-150 Gives You:

- The Highest Available Payload
- The Highest Available Torque
- The Best Selling Truck In The World
- A 2001 Consumers Digest Best Buy

DO THE MATH

All this adds up to the Best Deal of the year, on the Ford F-150

\$2,500 CASH BACK OR 0.9% APR (on approved credit) on Ford F-150*

	F-150	Tundra	Ram 1500	Silverado 1500
Engine	5.4L V8	4.7L V8	5.9L V8	5.3L V8
Torque	350	315	345	325
Payload	3045	2011	1570	1923

Capability**

Visit Your Southern California Ford Dealer

BUILT Ford TOUGH

*Excludes SuperCrew and Lightning editions. Not all buyers will qualify for lowest APR. Limited-term Ford Credit APR financing. Residency restrictions apply. Take new retail delivery from dealer stock of select 2001 models by 10/8/01. See dealer for qualification and other details. **F-150 Regular Cab and SuperCab Pickups equipped with the optional 7700# payload group have the highest maximum payload capacity in their class. Based on 2001 model year data available on the manufacturer's website at the time of print. Vehicle configuration assumes extended cab, short bed, 4x2, with largest displacement optional V8 engine. F-150 includes the optional 7700# payload package, which is not available on Tundra, Ram 1500, or Silverado 1500.

\$2,500 CASH BACK

"Cash Back" can be used in different ways to sweeten the deal for the buyer. For example, some people use the money as a down payment while others use it as a rebate. Knowing that this money is available, and planning ahead of time to make use of it, will help you get a good deal

OR

Take note of this key word "or". You can get cash back or 0.9% financing, but you can't have both. Calculate your deal both ways and see what saves you the most money.

0.9% APR (on approved credit)

This interest rate, which is nearly 1 percent, could save you thousands of dollars over the life of the loan. However, you can't get it unless you have good credit. Still, it's worth going for it.

*Excludes SuperCrew and Lightning editions. Not all buyers will qualify for lowest APR. Limited-term Ford Credit APR financing. Residency restrictions apply. Take new retail delivery from dealer stock of select 2001 models by 10/8/01. See dealer for qualification and other details. **F-150 Regular Cab and SuperCab Pickups equipped with the optional 7700# payload group have the highest maximum payload capacity in their class. Based on 2001 model year data available on the manufacturer's website at the time of print. Vehicle configuration assumes extended cab, short bed, 4x2, with largest displacement optional V8 engine. F-150 includes the optional 7700# payload package, which is not available on Tundra, Ram 1500, or Silverado 1500.

The large print giveth, and the small print taketh away. Now we are brought down to earth and learn all the restrictions there are on the above promises. Notably, special models aren't eligible; you have to have great credit; you have to borrow for a set amount of time; the offer expires soon; the offer isn't good in all states; the dealer may have restrictions.