

For all you non-shoppers out there... PST is ~~8%~~ <sup>7%</sup> and GST is 5%.

1. Gabe buys a new Impala. The base price is \$45 200. He selects an option package for \$3 200 that includes a sport suspension, sunroof, and engine upgrade. Freight is \$875, A/C tax is \$100, and the dealership charges a \$225 administration fee. The dealership gives him a trade-in allowance of \$8 500 for his old car.

*Not all dealers charge this.*

- a) What is the sticker price for this new vehicle?

base	45200	
options	3200	
freight	875	
A/C tax	100	
		<i>sticker</i>

*Not all dealers charge this.*

- b) What does Gabe pay in total for this vehicle after trade and taxes?

$$\begin{aligned}
 &49375 - 8500 = 40875 + 225 = 41100 \\
 &\text{sticker} \quad \text{trade} \qquad \qquad \text{admin fee} \\
 &41100 \times 0.07 = 2877 \text{ pst} \\
 &41100 \times 0.05 = 2055 \text{ gst} \\
 &\text{Total } \underline{\underline{\$46032}} \\
 &\qquad \qquad \qquad \underline{\underline{\$46443}}
 \end{aligned}$$

2. Jennifer buys a used car privately for \$14 500. When she goes to register her car, how much will she pay in taxes if the book value of the car is \$17 000?

*higher of price or book value, pst only*

$$\begin{aligned}
 &17000 \times 0.08 \\
 &= \underline{\underline{\$1360}}
 \end{aligned}$$

3. The sticker price of a vehicle is \$41 780 plus taxes. The monthly lease payment is \$612 plus taxes for a lease term of 48 months. A down payment of \$3 000 is required. The residual value of the vehicle is 45% of the new sticker price.

- a) Find the monthly lease payment.

$$612 \times 1.13 = \underline{\underline{\$691.56}}$$

- b) Find the total paid for the lease over the three years.

$$\begin{array}{l} 3000 + 691.56 \times 36 \text{ months} \\ \text{down} \\ \text{payment} \end{array} = \underline{\underline{\$27896.16}}$$

- c) Calculate the residual value of the vehicle at the end of the lease.

$$41780 \times 0.45 = 18801$$
$$\times 1.13$$

$$\underline{\underline{\$21245.13}} \\ \text{with taxes.}$$

4. Julie wishes to buy a car for \$37 159 (taxes are included). Her credit union will lend her money at a rate of 6.50% for four years.

Monthly Vehicle Loan Payments  
per \$1000 borrowed

Interest Rate (%)	Years to Repay Loan				
	1	2	3	4	5
5.00	85.61	43.87	29.97	23.03	18.87
5.25	85.72	43.98	30.08	23.14	18.99
5.50	85.84	44.10	30.20	23.26	19.10
5.75	85.95	44.21	30.31	23.37	19.22
6.00	86.07	44.32	30.42	23.49	19.33
6.25	86.18	44.43	30.54	23.60	19.45
6.50	86.30	44.55	30.65	23.71	19.57
6.75	86.41	44.66	30.76	23.83	19.68
7.00	86.53	44.77	30.88	23.95	19.80
7.25	86.64	44.89	30.99	24.06	19.92
7.50	86.76	45.00	31.11	24.18	20.04
7.75	86.87	45.11	31.22	24.30	20.16
8.00	86.99	45.23	31.34	24.41	20.28

- a) Calculate Julie's monthly loan payment.

$$\frac{37159}{1000} \times 23.71 = \underline{\underline{\$881.04}}$$

- b) Calculate Julie's total cost of purchasing the vehicle through the credit union.

$$881.04 \times 12 \times 4 = \underline{\underline{\$42282.92}}$$

5. Anne wishes to buy a new vehicle from a Manitoba dealership for \$52 200 before taxes. She has \$8 000 saved for a down payment.

a) Calculate the amount Anne needs to borrow to purchase the vehicle.

$$\begin{array}{r}
 \left[ \begin{array}{r}
 52\,200 \\
 + 4176 \text{ pst} \\
 + 2610 \text{ gst} \\
 \hline
 58\,986
 \end{array} \right] - 8\,000 \text{ Saved UP} = \underline{\underline{\$50\,986}}
 \end{array}$$

b) Anne can get a loan for 6 years at 5.50%. Calculate the amount of interest in the first month's payment.

$$\begin{aligned}
 & 50986 \times 0.055 \times \frac{1}{12} \\
 & = \underline{\underline{\$233.69}}
 \end{aligned}$$

6. Hilga takes her car in for servicing. She needs a new radiator for \$237.95 plus two headlights for \$17.99 each. Hilga also had her tires balanced for \$40.00 and had them filled with nitrogen for an extra \$12. What will her total bill be if the shop rate is \$105 per hour and the work requires 1.5 hours?

1 Rad @ 237.95	237.95
2 headlights @ 17.99	35.98
1 balance	40.00
1 nitrogen	12.00
1.5 hours @ \$105	157.50
	483.43
	pst 38.67
	gst 24.17
	Total \$546.27

7. A car travels 4 800 km and consumes 304 L of fuel. Calculate the fuel economy in L/100 km for the car.

$$FE = \frac{304}{4800} \times 100 = \underline{\underline{6.33 \text{ L} / 100 \text{ km}}}$$

8. John travels 963 km and then fills up his car with 82 litres of gas. The cost of gas is 101.9 cents per litre.

- a) Find the cost of filling the tank.

$$82 \text{ L} \times 1.019 = \underline{\underline{\$ 83.56}}$$

- b) Find the fuel economy in Litres per 100 km.

$$FE = \frac{82}{963} \times 100 = \underline{\underline{8.52 \text{ L} / 100 \text{ km}}}$$

9. Tommie has a job that requires a vehicle for out-of-town travel. On average, he drives at least 5 000 km per month. State one advantage and one disadvantage of leasing a vehicle.

Adv - new vehicle, lower monthly payment vs New car loan

Disadv - will exceed mileage limit per year  
60000 km !!! huge penalty / km  
vs 20000 km limit

10. Frank has been leasing his car for the last 4 years. He has made a total of \$31 400 in payments; which included a down payment of \$4 000.

Calculate Frank's monthly lease payments.

$$31400 - 4000 = 27400 \div 48$$

$$= \underline{\underline{\$570.83 \text{ per month}}}$$

11. Sally-Ann has been involved in a car accident. Explain if and how this will affect the cost of her Manitoba vehicle insurance.

if at fault, her discount may change  $\rightarrow$  pay more per year.

12. A brand new truck costs \$76 800 after taxes. It will depreciate 20% in the first year and 15% in the second year.

Calculate the value of the truck after the second year.

year 1  $76800 \times 0.20 = 15360$  dep.  
year 2  $61440 \times 0.15 = 9216$  dep.  
Value is \$52224 after 2 years

The following questions are meant to assess your understanding of vehicle insurance. Make sure your responses are complete enough to show your understanding.

13. Explain the difference between all-purpose and pleasure insurance.

all-purpose - can be used to drive to work every day.  
pleasure - only allowed to drive to work 4 times / month.

14. If you changed your deductible from \$500 down to \$100, what effect would this have on your premium?

increase premium because coverage is "better" - only pay \$100 when making a claim vs \$500.

15. If you are driving your vehicle into the US, what third-party liability should you choose?  
\$200,000    \$1,000,000    \$2,000,000    \$5,000,000

Explain your decision.

At least \$2,000,000 because US insurance works differently. They will sue to get damages covered.

16. Margaret lives in Altona. She is going to attend the Red River College next year. Margaret currently owns a 2015 Civic and has it registered in her name.
- a) Explain what changes Margaret will need to make to her registration so that she has proper coverage if she decides to drive into Winnipeg every day to attend classes.

will need to change to one who commutes into wpr.  
check it out at mpi.mb.ca when you use the insurance rate calculator.

- b) What impact will the above changes have on Margaret's insurance premium?

increase her premium.