

BUYING A CAR TEST

Name: _____

PART A: Answer the following questions in the space provided.

1. What does MSRP stand for?

2. What does it mean to lease a car?

3. Explain the following terms with respect to buying cars:

a) Freight _____

b) Finance Charge _____

c) Invoice Price _____

2. Justin's truck has a fuel consumption rating of 7.4 L / 100 km. In the first 5 years he owns the truck, Justin drives a total of 193 500 km. Justin pays \$2350 insurance each year. He renewed his driver's licence, once, at a cost of \$75 His vehicle licence plate is renewed each year at a cost of \$74 per year. If the average cost of fuel is \$1.24 / L, determine Justin's **average monthly operating cost** over the 5 years.

| Fuel Costs | | Vehicle Maintenance | Frequency (km) | # of Times | Cost | Maintenance Cost |
|------------------|--|-----------------------|----------------|------------|--------------|------------------|
| km Travelled | | Lube, Oil and Filter | 5000 | | \$29.95 | |
| Fuel Consumption | | Tire Rot./Brake Insp. | 10 000 | | \$41.50 | |
| Cost per Litre | | Wheel Alignment | 25 000 | | \$69.75 | |
| | | Cooling System | 50 000 | | \$72.95 | |
| TOTAL | | Tune-Up/Emission Sys | 50 000 | | \$225.00 | |
| | | Auto Transmission | 85 000 | | \$145.00 | |
| | | | | | Subtotal | |
| | | | | | HST | |
| | | | | | TOTAL | |

| | | | |
|------------------------|--|----------------------|--|
| Insurance /Year | | License Plate Fee | |
| # of Years | | # of Years | |
| Subtotal | | Total Plate Fees | |
| Tax (1%) | | License Renewal | |
| Insurance TOTAL | | License TOTAL | |

| | |
|-----------------------------|--|
| TOTAL COST | |
| Average Monthly Cost | |

PART B: Answer the following question on a separate sheet of paper (foolscap).

1. Kayla wants to purchase a new Volkswagen Jetta GLS with 1.8L 180 HP engine and manual transmission. She would like a sunroof, heated seats, 17" alloy wheels, and monsoon sound.

She has a trade in worth \$2500 and negotiates a \$1500 discount with the dealer.

- (a) Determine the purchase price excluding taxes.

Jetta
Manufacturer's Suggested Retail Price* (Canada)

| MODELS | | | |
|--|-----------------|-----------------------------|-----------|
| TRIM LEVEL | ENGINE | TRANSMISSION | RETAIL |
| GL | 2.0L 115 HP | 5-speed manual | \$ 21,700 |
| | 2.0L 115 HP | 4-speed automatic | \$ 22,800 |
| | 1.9L TDI 90 HP | 5-speed manual | \$ 23,680 |
| | 1.9L TDI 90 HP | 4-speed automatic | \$ 25,205 |
| GLS | 2.0L 115 HP | 5-speed manual | \$ 24,090 |
| | 2.0L 115 HP | 4-speed automatic | \$ 25,190 |
| | 1.8L 180 HP | 5-speed manual | \$ 26,190 |
| | 1.8L 180 HP | 5-speed automatic Tiptronic | \$ 27,590 |
| | 2.8L 174 HP VR6 | 5-speed manual | \$ 27,110 |
| | 2.8L 174 HP VR6 | 4-speed automatic | \$ 28,210 |
| | 1.9L TDI 90 HP | 5-speed manual | \$ 25,680 |
| | 1.9L TDI 90 HP | 4-speed automatic | \$ 27,205 |
| GLX | 2.8L 174 HP VR6 | 5-speed manual | \$ 34,110 |
| | 2.8L 174 HP VR6 | 4-speed automatic | \$ 35,210 |
| | 2.8L 200 HP VR6 | 5-speed automatic Tiptronic | \$ 37,110 |
| Excise Tax on Air Conditioning (add to all orders for A/C equipped models) ** | | | \$ 100 |
| Destination Charge (subject to change, add to all orders) | | | \$ 555 |

| OPTIONS | | |
|------------|--|----------|
| TRIM LEVEL | OPTION | RETAIL |
| GL | Air Conditioning | \$ 1,295 |
| | Side Curtain Protection™ | \$ 220 |
| GLS | Luxury Package - GLS 1.8L & 2.0L automatic / manual & GLS 1.9L manual only Includes power sunroof and 15" alloy wheels | \$ 1,445 |
| | Luxury Package - GLS VR6 only Includes power sunroof and 16" alloy wheels | \$ 1,740 |
| | Sport Luxury Package - GLS VR6 and 1.8L only Includes power sunroof, 17" alloy wheels, summer performance tires and sport suspension | \$ 2,640 |
| | Power Sunroof - GLS Wolfsburg, and 1.9L automatic only (Alloy wheels standard equipment on these models) | \$ 1,015 |
| | Side Curtain Protection™ | \$ 220 |
| | Cold Weather Package Includes heatable front seats and heated washer nozzles (Options included within Leather Package) | \$ 205 |
| | Leather Package Includes multi-function steering wheel, leather seating surfaces, steering wheel, shift knob/hand brake, heatable front seats and heated washer nozzles, and lumbar support. | \$ 1,400 |
| | Sport Suspension - GLS VR6 and 1.8L only | \$ 300 |
| GLX | Monsoon @ Sound System | \$ 470 |
| | 17" Alloy Wheels and Tires | \$ 600 |
| | Side Curtain Protection™ | \$ 220 |
| | Climatronic with impact pressure control free of CFC | \$ 540 |

2. Bob purchases a used car by answering a newspaper ad. The seller offers Bob a choice:

- i) pay \$13 500, certification fee of \$65.00, transfer fee of \$15.00, and the seller will pay for all repairs necessary for certification

OR

- ii) pay \$12 300, the following repair bills, certification fee and transfer fee.

| | |
|-------------------------------|----------|
| bodywork, repainting | \$564.70 |
| 2 new tires | \$251.30 |
| brake shoes, universal joints | \$140.80 |
| replace the headlights | \$ 57.90 |

Determine the Total Cost of both choices by showing all your work and state which choice is better.

3. Josh buys a used car from a dealership with a sticker price of \$13 850

He pays \$2500 down, then pays off the rest of the debt by making 36 monthly payments of \$489.34
Determine the following:

- a) Cash Price
- b) Finance Charge
- c) Amount Borrowed
- d) Effective Rate of Interest to 1 decimal place

4. **Leasing Information**

| | |
|-----------------------|-----------|
| Monthly payment | \$399 |
| Number of Months | 48 months |
| Amount Due At Signing | \$4725 |

Buying Information

| | |
|---------------|-----------|
| MSRP | \$28 490 |
| Freight | \$1060 |
| Down Payment | \$3560 |
| Finance Rate | 2.9% |
| Financed Time | 60 months |

Purchasing At Lease End Information

| | |
|----------------------------|-------------|
| Buyout Price | \$12 580.60 |
| Effective Rate Of Interest | 3.9% |
| Financed Time | 36 months |

Using the information above answer the following:

I) MAZDA MPV - LEASING AND BUYING OUT AT LEASE END

- a) Determine the cost of leasing.
- b) I am allowed 22,000 km per year. If I drove 96,400 km, and the charge for excess km is \$0.11 per km, how much do I owe at lease end?
- c) Determine the cash price of the car at lease end.
- d) Determine the finance charge to purchase the car at lease end.
- e) Determine the total cost of leasing and purchasing the car at lease end.

II) MAZDA MPV - BUYING THE VAN

- a) Determine the purchase price excluding taxes.
- b) Determine the cash price of the car.
- c) Determine the amount borrowed.
- d) Determine the finance charge.
- e) Determine the total cost (instalment price) of the car.

III) MAZDA MPV - COMPARING BUYING VERSUS LEASING

Determine how much is saved by buying the van rather than leasing and buying at lease end.

Name: _____

PART A: Answer the following questions in the space provided.

1. What does MSRP stand for?

Manufacturer's Suggested Retail Price ✓

2. What does it mean to lease a car?

To rent a car from the dealer ✓

(5)

3. Explain the following terms with respect to buying cars:

a) Freight cost to ship the car to the dealership ✓
from the factory

b) Finance Charge amount paid over the cash price ✓
when financing a car

c) Invoice Price price paid by the dealer for the car ✓

2. Justin's truck has a fuel consumption rating of 7.4 L / 100 km. In the first 5 years he owns the truck, Justin drives a total of 193 500 km. Justin pays \$2350 insurance each year. He renewed his driver's licence, once, at a cost of \$75. His vehicle licence plate is renewed each year at a cost of \$74 per year. If the average cost of fuel is \$1.24 / L, determine Justin's **average monthly operating cost** over the 5 years.

| Fuel Costs | | Vehicle Maintenance | Frequency (km) | # of Times | Cost | Maintenance Cost | |
|------------------|--------------------|-----------------------|----------------|------------|----------|------------------|------------------|
| km Travelled | 193500 km | Lube, Oil and Filter | 5000 | 38 | \$29.95 | \$1138.10 | |
| Fuel Consumption | 7.4 L/100 km | Tire Rot./Brake Insp. | 10 000 | 19 | \$41.50 | \$788.50 | |
| Cost per Litre | \$1.24/L | Wheel Alignment | 25 000 | 7 | \$69.75 | \$488.25 | |
| | | Cooling System | 50 000 | 3 | \$72.95 | \$218.85 | |
| TOTAL | \$17 755.96 | Tune-Up/Emission Sys | 50 000 | 3 | \$225.00 | \$675 | |
| | | Auto Transmission | 85 000 | 2 | \$145.00 | \$290 | |
| | | | | | | Subtotal | \$3598.70 |
| | | | | | | HST | \$467.83 |
| | | | | | | TOTAL | \$4066.53 |

| | | | |
|------------------------|-------------------|----------------------|--------------|
| Insurance /Year | \$2350 | License Plate Fee | \$74 |
| # of Years | 5 | # of Years | 5 |
| Subtotal | \$11750 | Total Plate Fees | \$370 |
| Tax (1%) | \$117.50 | License Renewal | \$75 |
| Insurance TOTAL | \$11867.50 | License TOTAL | \$445 |

| | |
|-----------------------------|-------------------|
| TOTAL COST | \$34134.59 |
| Average Monthly Cost | \$568.91 |

$2 \div (12 \times 5)$

(12)

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PART B

1 a)

| | | |
|--------------|-----------------|-------------------------------|
| BASE PRICE | \$ 26190 | ✓ |
| SPORT LUXURY | \$ 2640 | } ^{sunroof} alloys ✓ |
| COLD WEATHER | \$ 205 | |
| MONSOON | \$ 470 | |
| AKC TAX | \$ 100 | ✓ |
| DEST CHARGE | \$ 855 | ✓ |
| - DISCOUNT | \$ 1500 | ✓ |
| - TRADE IN | \$ 2500 | ✓ |
| | <u>\$ 26160</u> | ✓ |

2 i)

| | |
|------------|-------------------------|
| BASE PRICE | \$ 13500 |
| HST | $= 0.13 \times 13500$ ✓ |
| | $= \$1755$ |
| TOTAL | $= \$1755 + 13500$ ✓✓ |
| | $+ \$65 + \15 |
| | $= \$15335$ |

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ii)

| | |
|------------|-------------------------|
| base price | $= \$12300$ ✓ |
| HST | $= 0.13 \times \$12300$ |
| | $= \$1599$ ✓✓ |
| TOTAL | $= \$1599 + 12300$ |
| | $\$564.70 + \$251.30 +$ |
| | $\$140.80 + \57.90 |
| | $+ \$65 + \15 |
| | $= \$14993.70$ ✓ |

3. (a)

$$\text{HST} = 0.13 \times \$13850$$

$$= \$1800.50$$

$$\text{cash price} = \$1800.50 + \$13850$$

$$= \$15650.50$$

(b)

$$\text{I pay} = 36 \times 489.34$$

$$= \$17616.24$$

$$\text{I price} = \$2500 + 17616.24$$

$$= \$20116.24$$

Finance charge

$$= \$20116.24 - \$15650.50$$

$$= \$4465.74$$
 ✓

(c)

$$\text{Amount borrowed} = \$15650.50 - \$2500$$

$$= \$13150.50$$
 ✓

(d)

$$r = \frac{200NI}{P(n+1)}$$

$$= \frac{200(12)(4465.74)}{(12)(13150.50)(36+1)}$$

(ii) is a better choice since you save \$341.30

(4 - not tax or res.) 7

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$$= \frac{10717.776}{496568.5}$$

$$= 22.0\%$$
 ✓✓

4 I) (a) lease payments = $\$399 \times (48-1)$ ✓
 $= \$18753$

Cost of leasing = $\$18753 + \4725
 $= \$23478$ ✓

(b)

Km allowed = 4×22000 ✓
 $= 88000 \text{ Km}$

excess Km = $96400 - 88000$ ✓
 $= 8400 \text{ Km}$

Taxe = $\$0.11 \times 8400$ ✓
 $= \$924$

(c) HST = 0.13×12580.60 ✓
 $= \$1635.48$

Cash price = $\$1635.48 + \12580.60 ✓
 $= \$14216.08$

(d) $I = \frac{Pr(n+1)}{200N}$

$I = \frac{(14216.08)(3.9)(36+1)}{200(12)}$

$I = \frac{2051380.344}{2400}$

$I = \$854.74$ ✓✓

(e) Total cost = $\$23478$
 $+ \$924$
 $+ \$14216.08$ ✓
 $+ \$854.74$

(11)

$\$39472.82$

II)

purchase price = $\$28490$
 $+ \$1060$ ✓
 $\$29550$

(b) HST = 0.13×29550
 $= \$3841.50$ ✓

Cash price = $\$3841.50 + 29550$
 $= \$33391.50$ ✓

(c) Amount borrowed = $\$33391.50$
 $- \$3560$ ✓
 $\$29831.50$

(d) $I = \frac{Pr(n+1)}{200N}$

$= \frac{(29831.50)(2.9)(60+1)}{200(12)}$

$= \frac{5277192.35}{2400}$ ✓✓

$= \$2198.83$

(e) Total cost = $\$2198.83$
 $+ \$33391.50$ ✓
 $= \$35590.33$

(8)

III SAVINGS = $\$39472.82 - \35590.33 (1)
 $= \$3882.49$ ✓

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