## Before we begin, are there any questions from last day's work?

(9.4\_9.5 Vehicle Costs: Depreciation)

## Today's Learning Goal(s):

By the end of the class, I will be able to:

- a) use a proportion to calculate the unknown volume of gas used.
- b) calculate the monthly cost of owning a car.

MBF 3CI

(9.4 9.5) Vehicle Costs: Fuel Costs

Date: Jan 9, 2018

Ex. 1

Mr. Lowe drove 781 km<sub>1 way)</sub> to visit his parents. The fuel consumption rate for his van3isL8per 100 km. If gas is sold for \$117 / L, calculate the total fuel cost for a return trip.

Solution: Let **g** represent the volume of gasoline needed in L.

A .

Let c represent the <u>cost</u> of gasoline, in dollar

① 
$$\leftarrow$$
 Cost  $\doteq$  \$1.17 x 130  $\rightarrow$  2  
 $\leftarrow$   $\doteq$  \$152.10

total gasoline =  $2 \times 64.8 \lambda_3$ = 129.646= 1301 the total fuel cost for the trip is \$152.10

Ans: \$152.10

Ex. 2

Karen bought a new car for \$15 945 one year ago.

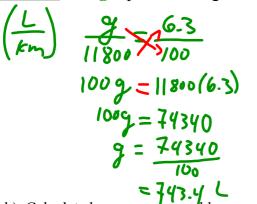
She got a 4 year car loan at prime (3% interest), so her monthly payments are \$353.

[FYI: After 4 years, she will have paid \$9.98 in interest, called the "total cost of borrowing"] Over the year, she drove 11 800 km, and paid an average of \$2 / L for fuel.

The fuel consumption rate for her car is £4 per 100 km.

a) Calculate her fuel cost for the first year.

Solution: Let g represent the gasoline used, in L.



Cost = 
$$$1.22 \times 743.4$$
  
=  $906.948$   
 $= $906.95$ 

Ans: \$906.95

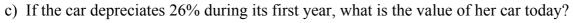
b) Calculate her average monthly car expenses (not including car insurance). (btw: car ins. min. \$250/month)

Car expenses 
$$\doteq$$
 75.58 + 353  $\rightleftharpoons$  3  $\Rightarrow$  3  $\Rightarrow$  428.58

**♣ =** \$ 75.58

her average monthly car expenses are: \$ 428.58

Ans: \$428.58



Depreciation = 
$$0.26 \times 15945$$

= \$11 799.30

Ans: \$11 799.30

(btw: Consider Buying a used 2-3 year old car instead)

Entertainment: p. 493#3 (use \$1 per 1L of gas), 4, 5

CHALLENGE: p. 495 #14

(and Compound Interest Review sheet #7-10)