8.3 Planning a Longer Drive

May 21, 2014

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Warm Up				
1. The scale on the southern Ontario side of the Official Ontario Provincial road map is 1 cm to km.	C	The scale on the northern Ontario side of the Official Ontario Provincial road map is 1 cm to 6 km.		р
 Complete the table for distances on the southern Ontario side of the Official Ontario Provincial road map. 	d C	Complete the table for distances on the northern Ontario side of the Official Ontario Provincial road map.		p.
Distance Actual on Map Distance		Distance on Map	Actual Distance	
a) 2 cm 4 Km		a) 2 cm	32 Km	
b) 25 cm 175 km		b) 25 cm	400 K	
c) 50em 350 km		c) 21.9~	350 km	
5. While driving at 100 km/h, what distance would you travel in each length of time?	v ti		would you length of tim	
a) 45 min = 7 5× 100=7	Stri	a) 45 min 🕿	.75×80	= 60
a) 45 min = .7 5×100=7 b) 1 \frac{1}{4} h = \frac{1}{2} \frac{5}{4} \times 100 = \frac{1}{2}	Sea	q) 1 ¹ / ₄ h = [.2\$x80=	10
c) 4 ½ h	7	$1\frac{1}{2}h$		
4 4				

1 = \$0.91

Calculating Distances on a Map # USD = \$1.09 CAN

1. a) Describe favourable driving conditions.

SUNNY, DRY, SMOOTH ROADS, NO TRAFFIC

b) Last Thanksgiving, John and Lucy's drive from Oakville to Ottawa took about 4 h longer than usual. Give 2 possible explanations.

WEATHOR, ACCIDENTS/TRAFFIC

- There are many factors involved in planning a driving trip.
- Choose a place in Ontario that is at least 400 km from where you live.
- 2. Identify the location of your home and your destination on the Official Ontario Provincial road map.
- a) Write the scale of the map:

l cm = 7

b) Use a ruler to measure the distance from where you live to your destination. ROCKINGHAM

The distance on the map is

- c) Calculate the actual distance. 4 13 km
- d) Calculate the distance using Google Maps.

502 Km

- On the Driving Distances chart, the distance between locations is measured from one city hall to another city hall.
- 3. Read the distance from the city or town where you live to your destination. Distance: 502 km
 - 4. Use 1 or more driving-directions web sites to obtain information about getting to your destination. Print the information given. What is the distance from your home to your destination? ____\$03_ km
 - 5. Compare the distances you found using the 3 different methods.
 - a) Circle the 2 methods that gave the closest distances to each other.

MAP SCALE

CHART WEB SITE

b) Which method of determining driving distances do you prefer? Why? WEBSITE / GOOGLE MAPS

c) Which method do you think is most accurate? Why?

WEBSITE / GOOGLE

• Choose a place in the United States that is at <u>least 1000 km</u> from where you live.

FLORIDA

- 6. a) What is the average distance from your home to your destination? _____2133 km
- b) What is the average driving time to get to your destination?
- Your vehicle's fuel consumption is approximately 9 L/100 km.
- The gas tank in your vehicle has a capacity of 50 L.
- 7. a) Estimate the distance you could travel with 1 full tank of gas. 555 km 9L 50L
- b) If you fill up the gas tank just after you cross the Canada/United States border, in what city do you expect to fill up next?

Explain your thinking.

WE BONT WANT TO RUN OUT OF GAS

8. You spent \$34 U.S. to buy gas. How much is this in Canadian money? Use today's current exchange rate.

\$34 U.S. x 1.0 9 = \$ 37.06 Cdn

9. About how many litres of fuel are you likely to use for the round trip.

9L ? = 192 L 100km 2133 km

10. Estimate the total cost (in U.S. money) of fuel that you would use for the round trip drive.

192 L × 1.25 2 = 240 240 × 1.09 = 261.60 USD

- Alina is a sales representative who uses her own vehicle for work.
- She lives in Hamilton.
- Over the next 2 days, Alina plans to see customers in Brampton, Brantford, Guelph, Kitchener, Mississauga, and Simcoe.
- 11. Use the Official Ontario Provincial road map to determine which cities Alina should visit each day. Then, write the cities in an order that will minimize her driving.

Day 1	Hamilton →	→ Hamilton
Day 2	Hamilton →	→ Hamilton

- 12. a) Approximately what distance will Alina drive on Day 1?
- b) Approximately what distance will she drive on Day 2?
- Alina's employer pays her a vehicle allowance of 41¢/km.
- The fuel consumption of Alina's vehicle is 6 L/100 km.
- 13. Calculate Alina's compensation.
- 14. Determine Alina's net pay for her vehicle.

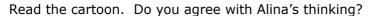
Today's fuel rate of \$

/L.

Net Pay = Compensation - Cost of Fuel

Check Your Understanding

Alina's last client made her wait a very long time. Then, Alina had a slow drive back to Hamilton in rush-hour traffic.



YES NO

Explain.

