

Trucking



For long-distance hauls, truckers receive two types of payment. They receive:

- a certain amount per kilometre for the distance they drive
- an hourly rate for when the truck is being loaded and unloaded

You are a trucker located near Winnipeg. You wish to limit yourself to four routes. You can choose from six routes. The two tables shown will help you to choose.

1. The table below shows the long-distance hauls you completed previously. During these hauls, you travelled at an average speed of 80 km/h and took a one-hour break for every 6 h to 8 h of driving.

From	To	Total Time, t (h)	Stopover Time, s (h)	Distance, d (km)
Near Winnipeg	Yellowknife	41	6	
Near Winnipeg	Inuvik	67	11	
Near Winnipeg	Calgary	19	3	
Near Winnipeg	Edmonton	20	3	
Near Winnipeg	Regina	8	1	
Near Winnipeg	Vancouver	34	5	

- a) Calculate the distance for each haul using the formula

$$\frac{d}{80} + s = t, \text{ where}$$

- d is the distance travelled, in kilometres
- s is the amount of stopover time, in hours
- t is the total time, in hours

Show your work.

Name: _____

Date: _____

b) The table below shows the pay for the long-distance hauls.

From	To	Rate for Loading and Unloading, r	Total Pay, p	Dollars Per Kilometre, k
Near Winnipeg	Yellowknife	\$60.00	\$1955.74	
Near Winnipeg	Inuvik	\$35.00	\$2754.64	
Near Winnipeg	Calgary	\$32.50	\$413.60	
Near Winnipeg	Edmonton	\$15.00	\$514.30	
Near Winnipeg	Regina	\$10.00	\$179.50	
Near Winnipeg	Vancouver	\$47.50	\$699.80	

Calculate the rate of pay per kilometre using the formula

$$2(dk + r) = p, \text{ where}$$

- d is the distance, in kilometres, to each location
- r is the rate paid, in dollars per hour, for loading and unloading a truck
- p is the total pay, in dollars
- k is the payment rate for driving, in dollars per kilometre

Show your work. Express each calculation to the nearest cent.

- 2. a)** Which route resulted in the *most* pay per kilometre? Why do you think it paid the highest amount?
- b)** Which route resulted in the *least* pay per kilometre? Why do think it paid the least amount?
- c)** Which four routes will you choose to drive? Justify your choices.