(50 marks)

Question 10

Brian had to drive from his house to Cork for a job interview.

He drove at an average speed of 80 km per hour for the first $\frac{1}{2}$ hour.

(a) (i) Find the distance, in km, driven by Brian in the first $\frac{1}{2}$ hour.

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(ii) It then took him $1\frac{1}{2}$ hours to drive the remaining 117 km to Cork. At what average speed, in km/h, did Brian drive the remaining 117 km?

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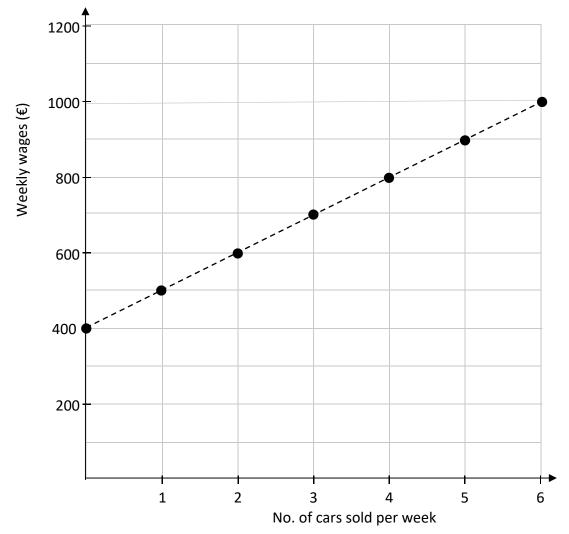
(iii) Using the **total distance** travelled and the **total time** taken, what was Brian's average speed for the journey from his house to Cork?

This question continues on the next page

(b) After the interview, Brian was offered a job as a car salesperson.
He could choose between 2 different contracts: Contract A and Contract B.
Each contract had a basic wage and a commission for each car sold.
Table 1 shows the details of each contract.

	Tab	le 1
	Contract A	Contract B
Basic wage per week (€)	400	600
Commission per car sold (€)	100	50

The graph on the grid below shows the total weekly wages for Contract A for up to 6 cars sold per week.



(i) Use the graph to find Brian's total weekly wage if he were to sell 3 cars in a particular week on Contract A.

(ii) **Table 2** below shows the total wages for Contract B for up to 6 cars sold per week. Complete the table.

Table 2	
No. of cars sold per week	Weekly Wage (€)
0	600
1	650
2	
3	
4	
5	
6	

(iii) Use the values from **Table 2** to plot the graph of the total weekly wages for Contract B on the grid on page 18.

(iv) Write down the point of intersection of the two graphs.Explain what each number means in the context of the question.

Point = (,)						 			
Explanation:							 	 		 	

(v) Brian thinks he can sell an average of 5 cars per week. Which contract do you think he should choose? Give a reason for your answer.

- Answer: -										
Reason:										
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