

Question 8

(45 marks)

(a) A motoring magazine collected data on cars on a particular stretch of road. Certain details on 800 cars were recorded.

(i) The ages of the 800 cars were recorded. 174 of them were new (less than 1 year old). Find the 95% confidence interval for the proportion of new cars on this road. Give your answer correct to 4 significant figures.

(ii) The data on the speeds of these 800 vehicles is normally distributed with an average speed of 87.3 km per hour and a standard deviation of 12 km per hour. What proportion of cars on this stretch of road would you expect to find travelling at over 95 km per hour?

