Leave blank

4. The weights of packets of mints are normally distributed with standard deviation 8 grams. A random sample of 50 packets of mints has a total weight of 10.84 kg.

(a) Find a 98% confidence interval for the mean weight of packets of mints.

(4)

(b) Explain why the Central Limit theorem is not required for part (a).

(1)

Bindy believes that the mean weight of a packet of mints is 0.22 kg.

(c) Giving a reason for your answer, comment on whether Bindy's belief is supported by the data.

(1)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Leave blank

Question 4 continued

Q4

(Total 6 marks)