AQA

A Level

A Level Mathematics

Understanding the Large Dataset

Name:

MME

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Total Marks:

1) Emma lives in Newcastle. She likes to eat a cheddar and pickle sandwich on standard sliced white bread.

    i) If Emma, is representative of the population of her local area, in which year did she eat the most pickle? [1]

    ii) State the modal year(s) for consumption of cheese like cheddar. [1]

Based on bread consumption, Emma thinks that standard sliced white *sws* will still be the most popular in the year 2020. Her friend, Mo, thinks that wholemeal and granary bread *wgb*, sliced and unsliced will be more popular.

    iii) Assuming linear trends calculate whether Emma or Mo will be correct. [4]

    iv) Why is assuming linear trends, without revising the model, unlikely to be a useful assumption to make. Use the fact that Emma intends to be eating sliced white bread in the year 2040. [1]

2) In the East Midlands from 2002 to 2004 (inclusive) the total consumption of fats remained the same at 186g per person. However, the different types of fats consumed changed.

    i) Produce one radar demonstrating the changing tastes in fat consumption over the three years. [5]

    ii) Comment on the changing tastes.

    [2]

3) The consumption of jams and fruit curds in England was 146g per person per week in 2001 and 14g per person per week in 2014.

    i) Comment on the significance on pattern/conclusion/hypothesis you can draw from the data spanning this period. [2]

    ii) Find the region in the England which, for jams and fruit curds, is most like the national trend. [1]

    iii) What sampling errors might be occurring to account for the results you have? [2]