1. An internet service provider is going to carry out a sample survey of its customers to investigate how satisfied customers are with their download speed.

(a) For this survey

(i) suggest a suitable sampling frame,

(ii) identify the sampling units.

(2)

(b) Give one advantage of taking a sample rather than a census.

(1)

A large number of customers completed the survey and 35% said they were satisfied with their download speed.

A random sample of 50 customers who completed the survey is taken.

(c) Write down a suitable distribution to model the number of customers in this sample that were satisfied with their download speed.

(2)

Using your answer to part (c)

(d) find the probability that more than 40% of the customers in the sample were satisfied with their download speed.

(2)

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Question 1 continued

(Total for Question 1 is 7 marks)