

Solutionbank S1

Edexcel AS and A Level Modular Mathematics

Mathematical models in probability and statistics

Exercise A, Question 1

Question:

Give one advantage and one disadvantage of using a mathematical model.

Solution:

Mathematical models are quicker and cheaper to produce.

But the model is only a simplification and does not include all aspects of the real problem.

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Exercise A, Question 2

Question:

Describe briefly the process of refining a mathematical model.

Solution:

Predictions based on the model are compared with observed data.

In the light of this comparison the model may be adjusted (refined).

The process of collecting observed data and comparing with revised prediction from the model is repeated.

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