AQA
Statistics 2
分类真题
2019-2022 册

A Level Clouds 出品

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Chapter 1 Poisson Distribution 1

Q1: 2020/Jan/S2

3		Matthew is shooting arrows at a target.
-		The number of arrows hitting the target can be modelled by a binomial distribution with
		n = 100 and $p = 0.01$
		n = 100 and $p = 0.01$
3	(a)	Using a Poisson distribution as an approximation, estimate the probability that more than
		3 arrows hit the target, giving your answer to three decimal places. [3 marks]
		16
		.0.45
		Answer
3	(b)	State under what conditions the Poisson distribution is considered to be a good
		approximation to the binomial distribution. [2 marks]

Q2: 2020/Jan/S2

4	Let X represent the number of people arriving at a hospital with a particular disease in a day.
	A random sample of 20 days is taken. The summarised data is
	$\sum x = 50 \qquad \text{and} \qquad \sum x^2 = 173$
4 (a)	Using the summarised data, explain why it would be reasonable to model X using a Poisson distribution.
	[4 marks]
,	10.
	109 29
	(0)
4 (b)	Using a Poisson model with mean 2.5, find $P(X = 4)$, giving your answer to three significant figures.
	[2 marks]
	Y
	Answer