

- Eggs are sold in boxes of 20. Cracked eggs occur independently and the mean number of cracked eggs in a box is 1.4.

(i) Calculate the probability that a randomly chosen box contains exactly 2 cracked eggs. [3]

This image shows a full page of white paper with horizontal dotted lines. The lines are evenly spaced and run across the width of the page, providing a guide for handwriting practice. There are no margins, text, or other markings on the page.

- (ii) Calculate the probability that a randomly chosen box contains at least 1 cracked egg. [2]

[illegible]

- (iii) A shop sells n of these boxes of eggs. Find the smallest value of n such that the probability of there being at least 1 cracked egg in each box sold is less than 0.01. [2]

[illegible]