

- (a) Two ponds, A and B , each contain a large number of fish. It is known that 2.4% of fish in pond A are carp and 1.8% of fish in pond B are carp. Random samples of 50 fish from pond A and 60 fish from pond B are selected.

Use appropriate Poisson approximations to find the following probabilities.

- (i) The samples contain at least 2 carp from pond A and at least 2 carp from pond B. [3]

[illegible]

- (ii) The samples contain at least 4 carp altogether. [3]

This image shows a full page of white paper with ten horizontal dashed lines, typical of primary school handwriting practice paper. The lines are evenly spaced and extend across the entire width of the page. There is no text or other markings on the paper.

- $P(X = 0) = [P(Y = 0)]^2$,
- $P(X = 2) = k[P(Y = 1)]^2$, where k is a non-zero constant.

[4]

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