1 The number, X, of used computers donated to a charity has a constant average rate of 2.4 computers per week.

(a) State a necessary condition for X to have a Poisson distribution. [1]

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Now assume that X has a Poisson distribution.

(b) Calculate the probability that the number of computers donated during a 4-week period is more than 6 and less than 9. [3]

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(c) Use a suitable approximating distribution to calculate the probability that more than 50 computers are donated during a 20-week period. [4]

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