11 The probability that Janice sees a kingfisher on any particular day is 0.3. She notes the number, X, of days in a week on which she sees a kingfisher.

   (i) State one necessary condition for X to have a binomial distribution.   **[1]**

Assume now that X has a binomial distribution.

   (ii) Find the probability that, in a week, Janice sees a kingfisher on exactly 2 days.   **[1]**

Each week Janice notes the number of days on which she sees a kingfisher.

   (iii) Find the probability that Janice sees a kingfisher on exactly 2 days in a week during at least 4 of 6 randomly chosen weeks.   **[3]**