5 Every day Richard takes a flight between Astan and Bejin. On any day, the probability that the flight arrives early is 0.15, the probability that it arrives on time is 0.55 and the probability that it arrives late is 0.3.

(a) Find the probability that on each of 3 randomly chosen days, Richard's flight does not arrive late. [1]

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(b) Find the probability that for 9 randomly chosen days, Richard's flight arrives early at least 3 times. [3]

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(c) 60 days are chosen at random.

Use an approximation to find the probability that Richard's flight arrives early at least 12 times.

[5]

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