

12 Anika and Beth are playing a game which consists of several points.

- The probability that Anika will win any point is 0.7.
- The probability that Beth will win any point is 0.3.
- The outcome of each point is independent of the outcome of every other point.

The first player to win two points wins the game.

- (a) Write down the probability that the game consists of more than three points. [1]
- (b) Complete the probability tree diagram in the Printed Answer Booklet showing all the possibilities for the game. [3]
- (c) Determine the probability that Beth wins the game. [3]
- (d) Determine the probability that the game consists of exactly three points. [2]
- (e) Given that Beth wins the game, determine the probability that the game consists of exactly three points. [4]