

- 1** Tina has two bags of counters, Bag A and Bag B.
- There are 5 red counters and 3 blue counters in bag A.  
There are 4 red counters and 5 blue counters in bag B.
- Tina takes at random a counter from each bag.
- (a) Draw a probability tree to represent this information (2)
- (b) Work out the probability that Tina takes two blue counters. (2)
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- (Total for question 1 is 4 marks)**

- 2** Hannah is going to play one game of chess and one game of backgammon.
- The probability she will win the game of chess is 0.6  
The probability she will win the game of backgammon is 0.7.
- (a) Draw a probability tree to represent this information (2)
- (b) Work out the probability that Hannah will win both games. (2)
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- (Total for question 2 is 4 marks)**

- 3** Rachel has two bags.
- In the first bag there are 4 red balls and 6 green balls.  
In the second bag there are 3 red balls and 5 green balls.
- Rachel takes at random a ball from the first bag.  
She then takes at random a ball from the second bag.
- (a) Draw a probability tree to represent this information (2)
- (b) Work out the probability that Rachel takes two green balls. (2)
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- (Total for question 3 is 4 marks)**

- 4** Jo is going to play one tennis match and match of squash.
- The probability she will win the tennis match is  $\frac{4}{5}$
- The probability she will win the squash match is  $\frac{7}{10}$
- (a) Draw a probability tree to represent this information (2)
- (b) Work out the probability that Jo will win both matches. (2)
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- (Total for question 4 is 4 marks)**

5 Each day Paul wears either a black tie or a red tie to work.

On any day the probability he wears a black tie is  $\frac{5}{9}$

- (a) Draw a probability tree for Monday and Tuesday. (2)
- (b) Work out the probability Paul wears different coloured ties on Monday and Tuesday. (2)

**(Total for question 5 is 4 marks)**

6 Jon plays a game where he can win, draw or lose.

The probability Jon wins any game 0.5.  
The probability Jon draws any game is 0.3

Jon plays two games.

- (a) Draw a probability tree to represent this information (2)
- (b) Work out the probability Jon wins both games. (2)

**(Total for question 6 is 4 marks)**

7 Bradley gets the bus on Saturday and Sunday.  
The probability that Bradley's bus will be late on any day is 0.2

- (a) Draw a probability tree to represent this information (2)
- (b) Work out the probability that Bradley's bus is late on at least one of these days. (2)

**(Total for question 7 is 4 marks)**