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)

(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)

(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 Green takes two green balls. (2)

(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)

(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)