Name: _____

Conditional Probability

Date:

Time:

Total marks available:

Total marks achieved: _____

Questions

Q1.

There are 10 cakes on a plate.

1 fruit slice
6 doughnuts
3 iced buns

Barry takes a cake at random and eats it.
He then takes at random a second cake.

Work out the probability that Barry takes two different types of cake.

....

(Total for Question is 4 marks)

Q2.

Fiza has 10 coins in a bag.
There are three £1 coins and seven 50 pence coins.

 Fiza takes at random, 3 coins from the bag.

Work out the probability that she takes exactly £2.50

. . . .
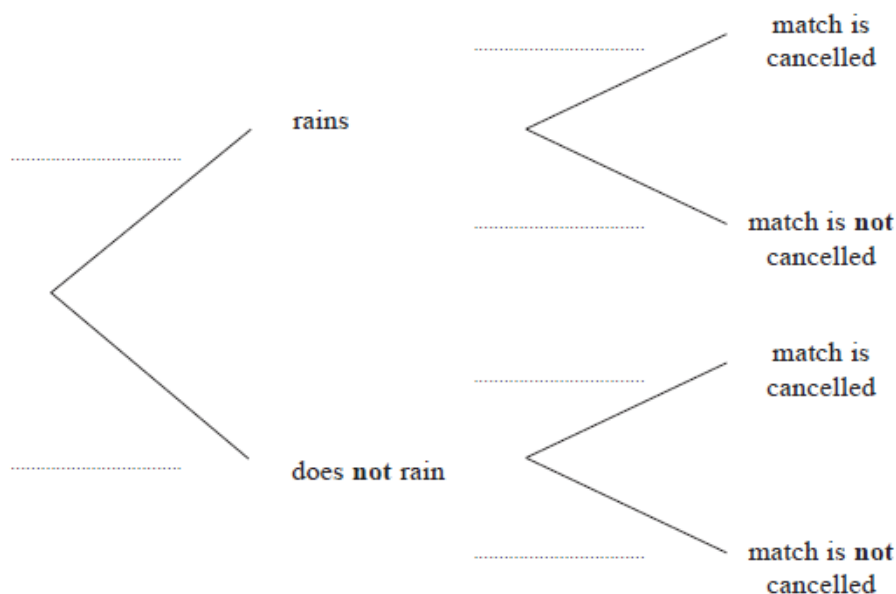
(Total for Question is 4 marks)

Q3.

The probability that it will rain on a day in June is 0.2

When it rains the probability that my tennis match is cancelled is 0.7

When it does **not** rain, the probability that my tennis match is **not** cancelled is 0.95

(a) Complete the probability tree diagram for this information.

(3)

(b) Work out the probability that, on a day in June, it does **not** rain and my tennis match is cancelled.

....

(2)

(Total for question = 5 marks)

Q4.

These 6 coins are in a box.

| 10p | 10p | 10p | 20p | 20p | 50p |

Pritesh takes at random 2 coins from the box.

Work out the probability that the total value of the 2 coins is at least 40p.

....

(Total for question = 4 marks)

Q5.

There are 11 girls and 8 boys in a tennis club.

Jake is going to pick at random a team from the tennis club.

The team will have two players.

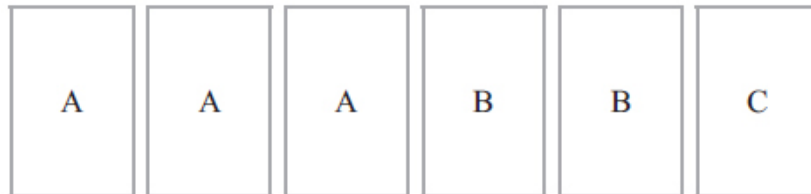Work out the probability that Jake will pick two boys or two girls for the team.

....

(Total for Question is 4 marks)

Q6.

Here are some cards.
Each card has a letter on it.

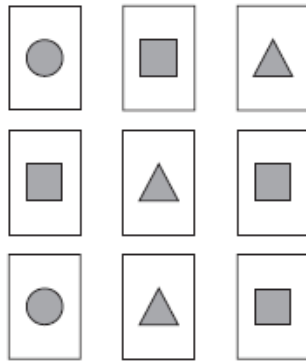| A | A | A | B | B | C |

Rachel takes at random two of these cards.

 Work out the probability that there are different letters on the two cards.

. . . .

(Total for Question is 4 marks)

Q7.

Here are 9 cards.
Each card has a shape on it.

In a game the cards are turned over so that the shapes are hidden.
The cards are then mixed up.

Katie turns over at random two of the cards.

Work out the probability that these two cards have different shapes on them.
You must show all your working.

....

(Total for question = 4 marks)

Q8.

There are six coins in a bag.
The value of each coin is shown below.

£2   £1   £1   50p   50p   50p

Laura takes at random a coin from the bag and keeps it.
Fahmida then takes at random a coin from the bag and keeps it.

Calculate the probability that Fahmida's coin has a greater value than Laura's coin.

....

(Total for question = 3 marks)

Q9.

There are three different types of sandwiches on a shelf.

There are

    4 egg sandwiches,
    5 cheese sandwiches
and 2 ham sandwiches.

Erin takes at random 2 of these sandwiches.

Work out the probability that she takes 2 different types of sandwiches.

....

(Total for Question is 5 marks)

Q10.

There are n sweets in a bag.
6 of the sweets are orange.
The rest of the sweets are yellow.

Hannah takes at random a sweet from the bag.
She eats the sweet.

Hannah then takes at random another sweet from the bag.
She eats the sweet.

The probability that Hannah eats two orange sweets is $\dfrac{1}{3}$

(a) Show that $n^2 - n - 90 = 0$

(3)

(b) Solve $n^2 - n - 90 = 0$ to find the value of n.

....

(3)

(Total for question = 6 marks)