Simple Probability and Estimation

Question Paper 2

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Topic	Handling Data Statistics
Sub Topic	Simple Probability and estimation(Probability)
Booklet	Question Paper 2

Time Allowed: 33 minutes

Score: /27

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	70%	60%	55%	50%	<50%

1 A jar contains coloured beads.
Ajit takes at random a bead from the jar.
The probability that the bead is yellow is 0.08
The probability that the bead is pink is 0.1
The probability that the bead is blue is 0.25

(a) (i) Find the probability that the bead is yellow or blue.

....

(ii) Find the probability that the bead is neither yellow nor pink.

....

(4)

Ajit replaces the first bead in the jar.
He then takes at random a second bead from the jar.

(b) Find the probability that the first bead is yellow and the second bead is blue.

....

(2)

A second jar contains 100 coloured beads.
20 of these beads are brown.

Ajit takes at random a bead from the jar.
He records the colour of the bead and then returns the bead to the jar.
He does this 60 times.

(c) Work out an estimate for the number of times Ajit records a brown bead.

....

(2)

(Total for Question 1 is 8 marks)

2   A bag contains only red counters, blue counters and yellow counters.
The number of red counters in the bag is the same as the number of blue counters.

Mikhail takes at random a counter from the bag.
The probability that the counter is yellow is 0.3

Work out the probability that the counter Mikhail takes is red.

....

(Total for Question 2 is 3 marks)

3   A bag contains only red bricks and blue bricks.
    There is a total of 20 bricks in the bag.

    The probability that a brick taken at random from the bag will be red is $\dfrac{2}{5}$

    How many blue bricks are there in the bag?

    ....

(Total for Question 3 is 3 marks)

4 The table shows the probabilities of people in Wales being in blood group O or in blood group A or in blood group AB.

Blood group	Probability
O	0.44
A	0.42
B	
AB	0.04

All people in Wales are in exactly one of the blood groups O, A, B or AB.

A person is selected at random from the people in Wales.

(a) Find the probability that this person is in blood group B.

....

(2)

(b) Find the probability that this person is in blood group O or A.

....

(1)

There are 1200 students in Aled's school.
Aled's school is in Wales.

(c) Work out an estimate for the number of pupils in Aled's school who are in blood group AB.

....

(2)

(Total for Question 4 is 5 marks)

5   Karen has a spinner.

When the spinner is spun once, the probability that it will land on yellow is $\frac{2}{5}$
Karen spins the spinner 30 times.

Work out an estimate for the number of times the spinner lands on yellow.

....

(Total for Question 5 is 2 marks)

6   There are 50 marbles in a bag.
35 of the marbles are brown.

Otti takes at random a marble from the bag.
He records the colour of the marble and puts the marble back in the bag.

He does this 300 times.

Work out an estimate for the number of brown marbles he takes.

....

(Total for Question 6 is 2 marks)

7 Li throws a 6-sided biased dice once.

The table shows the probability that the dice will land on 1, 2, 3, 5 or 6

Number	1	2	3	4	5	6
Probability	0.15	0.1	0.05		0.2	0.15

(a) Work out the probability that the dice will land on 4

....

(2)

(b) Work out the probability that the dice will land on an odd number.

....

(2)

(Total for Question 7 is 4 marks)