Dulwich College Shanghai

IGCSE - Individual data

41 min 35 marks

1.	The numbers 0, 1, 1, 1, 2, k , m , 6, 9, 9 are in order ($k \neq m$). Their median is 2.5 and their mean is 3.6.				
	(i)	Write down the mode.	[1]		
	(ii)	Find the value of <i>k</i> .	[1]		
	(iii)	Find the value of <i>m</i> .	[2]		
	(iv)	Maria chooses a number at random from the list. The probability of choosing this number is $\frac{1}{5}$. Which number does she choose?	[1]		

1

@ Doublastruck & CIE I iconsod to Dubwich College Paiiing

2. The quiz scores of a class of *n* students are shown in the table.

Quiz score	6	7	8	9
Frequency (number of students)	9	3	а	5

The mean score is 7.2. Find

- (i) *a*, [3] (ii) *n*,
- (iii) the median score. [1]

3.

Grade	1	2	3	4	5	6	7
Number of students	1	2	4	7	4	8	2

The table shows the grades gained by 28 students in a history test.

(i)	Write down the mode.	[1]
(ii)	Find the median.	[1]

(iii) Calculate the mean.

[3]

[1]

(iv) Two students are chosen at random.

	Calculate the probability that they both gained grade 5.	[2]
(v)	From all the students who gained grades 4 or 5 or 6 or 7, two are chosen at random.	
	Calculate the probability that they both gained grade 5.	[2]
(iv)	Students are chosen at random, one by one, from the original 28, until the student chosen has a grade 5.	
	Calculate the probability that this is the third student chosen.	[2]

4. Each student in a class is given a bag of sweets.

The students note the number of sweets in their bag.

The results are shown in the table, where $0 \le x < 10$.

Number of sweets	30	31	32
Frequency (number of bags)	10	7	x

(i) State the mode. [1]
(ii) Find the possible values of the median. [3]

(iii) The mean number of sweets is 30.65.

Find the value of x.

[3]

5. A normal die, numbered 1 to 6, is rolled 50 times.



The results are shown in the frequency table.

Score	1	2	3	4	5	6
Frequency	15	10	7	5	6	7

(a) Write down the modal score.

		Answer (a)	[1]
(b)	Find the median score.		
		Answer (b)	[1]
(c)	Calculate the mean score.		
		Answer (c)	[2]
(d)	The die is then rolled another 10 times. The mean score for the 60 rolls is 2.95. Calculate the mean score for the extra 10 rolls.		
		Answer (d)	[3]