## IGCSE - Individual data

41 min<br>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.
(ii) Find the value of $k$.
(iii) Find the value of $m$.
(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?
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 | $a$ | 5 |

The mean score is 7.2. Find
(i) $a$,
(ii) $n$,
(iii) the median score.
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.
(ii) Find the median.
(iii) Calculate the mean.
(iv) Two students are chosen at random.

Calculate the probability that they both gained grade 5 .
(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 .
(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.
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 $0 \leq x<10$.

| Number of sweets | 30 | 31 | 32 |
| :---: | :---: | :---: | :---: |
| Frequency (number of bags) | 10 | 7 | $x$ |

(i) State the mode.
(ii) Find the possible values of the median.
(iii) The mean number of sweets is 30.65 .

Find the value of $x$.
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)
(b) Find the median score.

Answer (b)
(c) Calculate the mean score.

Answer (c)
(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) $\qquad$

