## Stem and Leaf Past Paper Questions

## Q1.

Here are the heights, in centimetres, of 15 children.

| 123 | 147 | 135 | 150 | 147 |
| :--- | :--- | :--- | :--- | :--- |
| 129 | 148 | 149 | 125 | 137 |
| 133 | 138 | 133 | 130 | 151 |

Show this information in an ordered stem and leaf diagram.


Q2.

Jake and Sarah each played a computer game six times.
Their scores for each game are shown below.

| Jake | 10 | 9 | 8 | 11 | 12 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sarah | 2 | 10 | 7 | 14 | 4 | 10 |

(a) Who had the most consistent scores, Jake or Sarah?

You must give a reason for your answer.
$\qquad$
$\qquad$

## [Continued]

Jake played a different game 20 times.

The stem and leaf diagram shows information about his scores.

| 0 | 9 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 23345 |  |  |  |  |  |  |
| 2 |  |  | 6 | 6 | 6 | 6 | 7 |
| 3 | 13468 |  |  |  |  |  |  |
| 4 | 029 |  |  |  |  |  |  |

```
Key
1| 2 represents }12\mathrm{ points
```

Jake said his modal score was 6 points because 6 occurs most often in the diagram.
(b) Is Jake correct?

You must explain your answer.
$\qquad$
$\qquad$
(Total for question $=\mathbf{2}$ marks)

## Q3.

Jeremy catches 19 fish.
Here are the weights, in grams, of the fish.

| 50 | 61 | 57 | 47 | 53 | 75 | 62 | 48 | 64 | 73 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 78 | 51 | 66 | 58 | 66 | 48 | 55 | 69 | 50 |  |

Draw an ordered stem and leaf diagram for these weights.

|  |  |
| :--- | :--- |
|  |  |
|  |  |
|  |  |

Q4.
The list below shows the weight, in grams, of 15 baskets of strawberries.

| 193 | 200 | 207 | 211 | 198 |
| :--- | :--- | :--- | :--- | :--- |
| 189 | 218 | 195 | 206 | 189 |
| 223 | 190 | 207 | 205 | 212 |

Show this information in an ordered stem and leaf diagram.
You must include a key.

$\square$

Q5.
Here are the heights, in cm, of 20 sunflower plants.

| 73 | 84 | 78 | 96 | 98 | 84 | 101 | 93 | 71 | 104 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 | 92 | 95 | 103 | 100 | 96 | 87 | 91 | 88 | 96 |

(a) Draw an ordered stem and leaf diagram for these heights.


Key:
(b) Work out the range.
(c) Find the median height.

Q6.

Here are the marks 20 students got in a French test.

| 76 | 82 | 84 | 69 | 80 | 64 | 70 | 81 | 75 | 91 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 87 | 67 | 80 | 70 | 94 | 76 | 81 | 69 | 71 | 77 |

(a) Show this information in a stem and leaf diagram.


One of these students is going to be chosen at random.
The pass mark in the French test is 71
Omar writes,
The probability that this student failed the French test is $\frac{1}{4}$
Omar is wrong.
(b) Explain why.
$\qquad$
$\qquad$

## Q7.

Yan recorded the ages, in years, of a sample of people at a fairground.
He drew this stem and leaf diagram for his results.

| 1 | 5 | 5 | 7 | 7 | 7 | 7 | 9 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2 | 0 | 3 | 7 | 8 | 8 |  |  |
| 3 | 4 | 6 | 7 | 7 |  |  |  |
| 4 | 2 | 5 | 9 |  |  |  |  |
| 5 | 0 | 5 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

Key:
$1 \mid 5$ represents 15 years of age
(a) Write down the number of people in the sample.
$\qquad$
(b) Write down the mode.

## years

(c) Work out the range.

Q8.

The stem and leaf diagram gives the heights, in cm , of some potato plants.

| 2 | 3 | 5 | 5 | 9 |  | Key <br> 3 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 4 | 7 | 7 | 7 | 7 | $2 \mid 3$ represents 23 cm <br> 4 | 1 | 3 |
| 4 | 4 |  |  |  |  |  |  |
| 5 | 2 | 6 | 7 | 9 |  |  |  |
| 6 | 3 | 6 | 8 |  |  |  |  |

(a) Write down the greatest height.
$\qquad$
(b) Write down the mode.
$\qquad$
(c) Find the median.
$\qquad$

Q9.
Hetvi asked her friends how many stickers they each have in their collection.
Here are her results.

| 77 | 86 | 94 | 87 | 71 | 98 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 74 | 103 | 71 | 85 | 82 | 84 |
| 97 | 91 | 88 | 89 | 75 |  |

(a) Show this information in a stem and leaf diagram.

(b) Find the median number of stickers.
$\qquad$

## Q10.

The stem and leaf diagram shows information about the ages, in years, of the people on a fairground ride.

| 0 | 8 | 8 | 9 |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 1 | 2 | 3 | 4 | 4 | 4 | 6 | 7 |
| 2 | 1 | 2 | 3 | 4 | 5 | 6 | 8 |  |
| 3 | 1 | 4 | 8 |  |  |  |  |  |
| 4 | 2 | 3 | 6 | 8 |  |  |  |  |
| 5 | 0 | 3 |  |  |  |  |  |  |

Key: ${ }^{4} \mid 2$ means 42 years
(a) How many people were on the fairground ride?
$\qquad$
(b) Work out the median age.
(c) Work out the range of the ages.

