

Examples

Workout



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Question 1: Draw ordered stem and leaf diagrams for the following sets of data. Remember to include a suitable key.

- (a) 35, 50, 38, 44, 53, 41, 39, 45, 48, 55  
 (b) 18, 42, 5, 28, 33, 9, 15, 38, 32, 9, 11, 24, 40, 29, 24  
 (c) 153, 144, 148, 140, 149, 145, 144, 142, 158, 135, 140, 139, 160  
 (d) 3.4kg, 1.9kg, 2.8kg, 3.1kg, 5.1kg, 3.9kg, 4.8kg, 4.5kg, 2.2kg, 3.7kg,

Question 2: The stem and leaf diagram below shows the ages of a group of people.

- (a) How many people are there in the group?  
 (b) How old is the youngest member of the group?  
 (c) How old is the oldest member of the group?  
 (d) How many people are under 20?  
 (e) How many people are over 25?

Key: 1|4 means 14 years old

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

Question 3: The stem and leaf diagram below shows heights of Mrs Smith's flowers.

- (a) How many flowers does Mrs Smith have?  
 (b) What is the height of the shortest flower?  
 (c) What is the height of the tallest flower?  
 (d) How many flowers have a height of 14cm?  
 (e) How many flowers have a height greater than 40cm?  
 (f) What fraction of the flowers have a height under 20cm?

Key: 0|9 means 9cm

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

Question 4: Fiona recorded the times it took 11 students to run 200 metres.  
The times are measured in seconds and are:

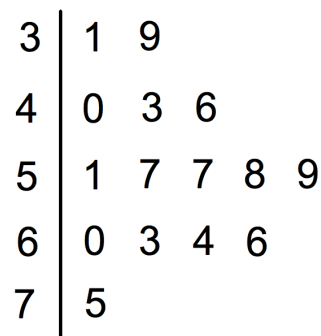
27    38    42    35    43    49  
50    37    38    41    48

- Draw an ordered stem and leaf diagram to show this information.
- Work out the median time.
- Work out the range of the times
- How many students finished the race in under 40 seconds?

Question 5: The following stem and leaf diagram shows times taken for 15 people to complete a jigsaw.

Key: 3|1 means 31 minutes

- Write down the modal time taken.
- Write down the median time taken.
- Write down the range of times taken.
- What fraction of the people took over one hour?

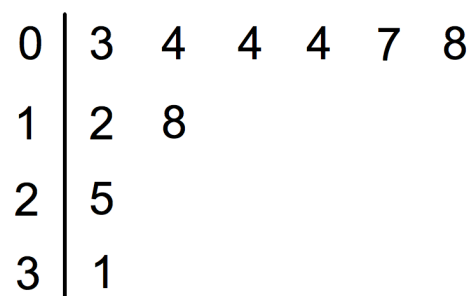


### Apply

Question 1: The stem and leaf diagram shows the weights of 10 books that are placed on a book shelf.

Key: 0|3 means 0.3kg

- Write down the modal weight.
  - Find the median weight.
  - Find the range of the weights.
- The bookshelf can hold 12kg.
- Will the bookshelf be able to support the 10 books?



## Stem and Leaf Diagrams

Videos 169 and 170 on [www.corbettmaths.com](http://www.corbettmaths.com)

Question 2: The stem and leaf diagram shows the heights of 14 students on a school trip to a theme park.

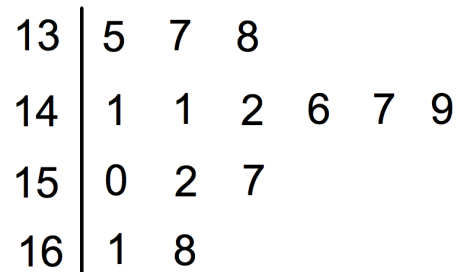
(a) Find the median height.

Key: 13|5 means 135cm

(b) Work out the range of the heights

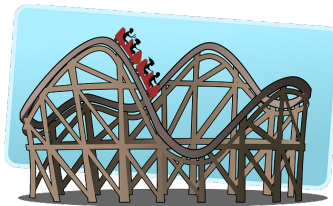
A “fast pass” allows one of the students to go on a ride at the theme park without queueing.

One of the students is picked at random to win a “fast pass” for a ride.



To go on the ride, the student must be at least 140cm tall.

(c) Write down the probability that the student who wins the “fast pass” cannot go on the ride.



Question 3: This dual stem and leaf diagram shows the results for the students in Mr Turner’s class.

(a) How many boys are there in the class?

(b) How many girls are there in the class?

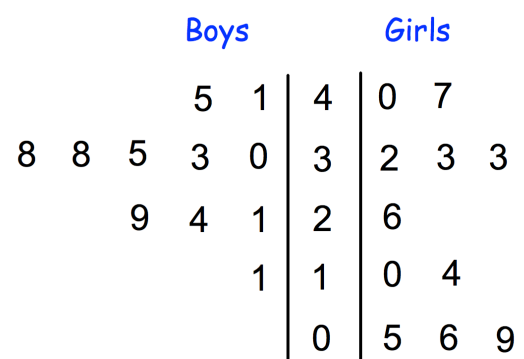
(c) What was the highest mark in the class?

(d) Find the range of the boys’ results

(e) Find the median of the girls’ results

(f) Find the modal mark for the whole class.

(g) Compare the boy’s and girls’ results.



Boys Key: 9|2 means 29 marks

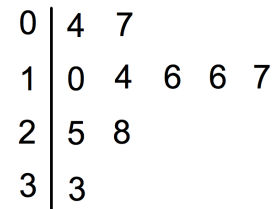
Girls Key: 2|6 means 26 marks

Question 4: The stem and leaf diagram shows the time taken 10 students to answer a puzzle

(a) Work out the range

Key: 0|4 means 4 seconds

(b) Work out the median



Another student answers the puzzle in 38 seconds.

(c) Tick the box to show how this will effect the range

The range will decrease

The range will stay the same

The range will increase

(d) Tick the box to show how this will effect the median

The median will decrease

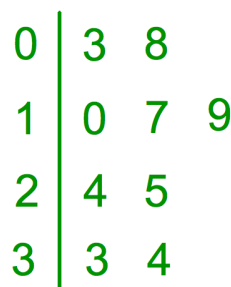
The median will stay the same

The median will increase

Question 5: Amelia has been asked to draw a stem and leaf diagram.  
Can you spot any mistakes?

Draw an ordered stem and leaf for:

24 19 28 8 17 33 34 10 3 25



Answers



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