

GCSE Maths: Stem-and-leaf diagrams (Higher): worksheet

GCSE Maths - Statistics - Higher - Lesson 24.9

Name: _____

Date: _____

Score: _____

13 questions. Write your answers in the spaces. Answers and step-by-step help are free at websink.site/gcse/maths/ch24-statistics/higher/stem-and-leaf-diagrams/

Exercise 24I Stem-and-leaf diagrams Non-calculator

- 1** The ages of 12 people at a party are: 23, 31, 19, 42, 35, 27, 31, 45, 22, 38, 29, 51. Draw an ordered stem-and-leaf diagram.

Answer: _____

- 2** The heights, in cm, of 15 students are: 152, 147, 161, 158, 143, 166, 150, 155, 149, 163, 157, 171, 160, 154, 148. Draw an ordered stem-and-leaf diagram with the stems 14, 15, 16 and 17.

Answer: _____

- 3** The stem-and-leaf diagram shows the number of points scored by 15 players in a season.

Stem	Leaf
1	2 5 7
2	1 3 3 6 8
3	0 1 4 5 8
4	1 5

Key: 2 | 3 means 23 points

- (a) How many values are more than 30? (b) Find the mode. (c) Find the median. (d) Find the range.

- (a) Values more than 30

Answer: _____

- (b) Mode

Answer: _____

- (c) Median

Answer: _____

- (d) Range

Answer: _____

- 4** The masses, in kg, of nine parcels are shown.

Stem	Leaf
1	2 5 8
2	1 3 3 6
3	0 4

Key: 1 | 2 means 1.2 kg

Work out (a) the median, (b) the mode and (c) the range of the masses.

(a) Median

Answer:

(b) Mode

Answer:

(c) Range

Answer:

5 The back-to-back diagram shows the scores of nine boys and ten girls.

Boys	Stem	Girls
	2	8
8 5 2	3	1 3 6 8 9
7 5 4 1	4	2 3 6 9
5 2	5	

Key: for boys 4 | 1 means 41; for girls 1 | 3 means 31

(a) Find the median score for each group. (b) Find the range for each group. (c) Compare the scores.

(a) Medians

Answer:

(b) Ranges

Answer:

(c) Comparison

Answer:

6 Look at this stem-and-leaf diagram for the ages of six people: 2 | 8 3 1, 3 | 5 2, 4 | 9. Give two things that are wrong with it.

Answer:

7 Work out the mean of the 12 ages in the first question of this exercise: 23, 31, 19, 42, 35, 27, 31, 45, 22, 38, 29, 51. Give your answer to 1 decimal place.

Answer:

8 Write down the original list of data shown by this stem-and-leaf diagram.

Stem	Leaf
6	1 4 8
7	0 3 3 9
8	5

Key: 6 | 1 means 61 cm

Answer:

9 Find the lower quartile, the upper quartile and the interquartile range of the 15 scores in the diagram for question 3.

Stem	Leaf
1	2 5 7
2	1 3 3 6 8
3	0 1 4 5 8
4	1 5

Key: 2 | 3 means 23 points

Answer:

- 10** Maya says: "A stem-and-leaf diagram is better than a grouped frequency table if you want the exact median." Is she right? Explain.

Answer:

- 11** A stem-and-leaf diagram for 11 values is shown.

Stem	Leaf
1	0 2 5 8
2	0 1 6 9
3	3 6
4	4

Key: 1 | 2 means 12

Show that the mean is greater than the median.

Answer:

- 12** The scores of the students in two groups are: Group X: 22, 27, 31, 35, 38, 44, 46. Group Y: 25, 29, 32, 33, 40, 41, 48, 50. Draw a back-to-back stem-and-leaf diagram with Group X on the left.

Answer:

- 13** The stem-and-leaf diagram shows the lengths of eight snakes, in metres.

Stem	Leaf
1	2 8
2	1 3 6 9
3	4 5

Key: 1 | 2 means 1.2 m

Show that the median length is 2.45 m.

Answer:
