



2.16D Stem and Leaf: Fluency and Exam Drill

EDEXCEL Edexcel 1MA1 • Calculator allowed • about 55 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** The stem and leaf diagram shows the ages of visitors to a small museum.

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

Write down the smallest age.

(Total for Question 1 is 1 mark)

- 2** Given the stem and leaf diagram for test scores:

Stem	Leaf
4	6 8
5	0 2 7
6	1

Write down the largest score.

(Total for Question 2 is 1 mark)

- 3 Complete the stem and leaf diagram for the data: 33, 30, 37.

Stem	Leaf
3	—

Write the leaf values in order.

(Total for Question 3 is 1 mark)

- 4 A stem and leaf diagram shows the number of books read by students:

Stem	Leaf
0	4 6
1	2 3 9

How many students are shown in the diagram?

(Total for Question 4 is 1 mark)

- 5 Here is part of a stem and leaf diagram for temperatures (degrees Celsius):

Stem	Leaf
2	3 5 9
3	0 _

One value is missing from the leaf for stem 3. The full data set is {23, 25, 29, 30, 33}. Fill in the missing leaf.

(Total for Question 5 is 1 mark)

- 6 The stem and leaf diagram shows the scores in a class test.

Stem	Leaf
5	1 3 8
6	0 2 4 9

- a) Write down the median score.
b) Write down the mode of the scores.

(a) Write down the median score.

(2)

(b) Write down the mode of the scores.

(1)

(Total for Question 6 is 3 marks)

- 7 The stem and leaf diagram shows travel times (minutes) for a sample of journeys.

Stem	Leaf
9	5 7 8
10	1 4
11	0 2

Work out the range of the travel times.

(Total for Question 7 is 2 marks)

- 8** A survey recorded the number of goals scored by junior teams in a season. The stem and leaf diagram is:

Stem	Leaf
0	2 2 5
1	0 3 4 4

- a) How many teams scored fewer than 10 goals?
b) Calculate the interquartile range (IQR).

(a) How many teams scored fewer than 10 goals? (1)

(b) Calculate the interquartile range (IQR). (3)

(Total for Question 8 is 4 marks)

- 9** The stem and leaf diagram shows the number of texts sent by a group of teenagers in one evening.

Stem	Leaf
0	4 8 9
1	0 3 4 7
2	1

Work out the mean number of texts sent.

(Total for Question 9 is 2 marks)

- 10** The stem and leaf diagram shows the number of pages read by a group of students in a week.

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

a) Work out the median number of pages.

b) Work out the range.

(a) Work out the median number of pages.

(2)

(b) Work out the range.

(1)

(Total for Question 10 is 3 marks)

- 11** Here are two stem and leaf diagrams showing the times (minutes) taken by two teams to complete a puzzle.

Team A

Stem	Leaf
1	2 5 8
2	0 3

Team B

Stem	Leaf
1	4 6 9
2	1 5

- a) Work out the median time for Team A.
b) Work out the median time for Team B.
c) State which team was generally faster, giving a reason.

(a) Work out the median time for Team A. (1)

(b) Work out the median time for Team B. (1)

(c) State which team was generally faster, giving a reason. (2)

(Total for Question 11 is 4 marks)

- 12** The stem and leaf diagram shows the number of pets owned by families in a street.

Stem	Leaf
0	0 1 1 2 3
1	0 2

Work out what fraction of the families own more than 5 pets. Give your answer in its simplest form.

(Total for Question 12 is 2 marks)

Mark scheme · 2.16D Stem and Leaf: Fluency and Exam Drill

Question 1

- **B1** 2 cao
- **Answer: 2**

Question 2

- **B1** 61 cao
- **Answer: 61**

Question 3

- **B1** 0 3 7 cao
- **Answer: 0 3 7**

Question 4

- **B1** 5 cao
- **Answer: 5**

Question 5

- **B1** 3 cao
- **Answer: 3**

Question 6

- (a) **M1** order data and identify middle value for 7 values oe
- (a) **A1** 60 cao
- (a) **Answer: 60**
- (b) **B1** no mode oe
- (b) **Answer: No mode**

Question 7

- **M1** identify smallest and largest values (95 and 112) oe
- **A1** 17 minutes cao
- **Answer: 17 minutes**

Question 8

- (a) **B1** 3 cao
- (a) **Answer: 3**
- (b) **M1** order data and find Q1 and Q3 with correct halves oe
- (b) **M1** calculate $Q3 - Q1$ correctly oe
- (b) **A1** 12 cao
- (b) **Answer: 12**

Question 9

- **M1** sum all 8 values: $4+8+9+10+13+14+17+21 = 96$ oe
- **A1** 12 cao
- **Answer: 12**

Question 10

- (a) **M1** order 8 values and identify middle two, 30 and 32 oe
- (a) **A1** 31 cao
- (a) **Answer: 31**
- (b) **B1** 16 cao
- (b) **Answer: 16**

Question 11

- (a) **B1** 18 minutes cao
- (a) **Answer: 18 minutes**
- (b) **B1** 19 minutes cao
- (b) **Answer: 19 minutes**
- (c) **M1** compare the two medians, 18 and 19 oe
- (c) **A1** Team A, since $18 < 19$ (lower median time) cao
- (c) **Answer: Team A was generally faster, since their median time (18 minutes) is lower than Team B's (19 minutes).**

Question 12

- **M1** identify 2 families out of 7 own more than 5 pets oe
- **A1** 2/7 cao
- **Answer: 2/7**