



Stem and Leaf Diagram Exam Practice

Q1. Here are the weights, in kg, of 20 dogs.

21 35 41 47 32 12 45 40 52 33 8 55 41 29 72 38 42 48 38 9

Draw an ordered stem and leaf diagram to show this information.
You should include a key.

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

key
1|2 = 12 dogs

Answer: _____

(3 marks)



Q2. Here are the times, in seconds, it took 15 people to complete a spelling test:

54 65 68 49 72 56 66 62 68 51 59 71 60 53 70

Draw an ordered stem and leaf diagram to show this information.

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

Key:

$$4|9 = 49s$$

Answer: _____

(3 marks)



Q3. The heights of a class of year 9 school pupils were measured in cm.

1		45	47	48			
<hr/>							
1		50	52	53	54	55	57
<hr/>							
1		61	63	64	67	69	
<hr/>							
1		70	72	72	75		

Key:
 $7 \overline{) 145} = 145$
cm

a) Complete the key.

Answer: _____
(1 mark)

b) Find the range of the heights.

$$175 - 145$$

Answer: 30 cm
(1 mark)

c) Find the median height in the class.

$$\frac{157 + 161}{2} = 159 \text{ cm}$$

Answer: _____
(2 marks)



Q4. The lengths of cucumbers in a box were measured in cm:

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

Key:

$$114 = 14 \text{ cm}$$

a) Complete the key.

Answer: _____
(1 mark)

b) Find the mean weight of a cucumber.

$$\frac{419}{16} = 26.1875$$

Answer: 26.2 cm
(2 marks)

c) A cucumber is rejected if it is less than 17 cm or more than 34 cm in length. Find the probability that a randomly selected cucumber from the box is rejected.

$$\frac{5}{16}$$

Answer: $\frac{5}{16}$
(2 marks)



Q5. Here are the annual wages of a company's employees, in thousands of pounds:

31, 24.5, 43, 53.2, 19.5, 59.3, 29, 21.7, 53.7, 31.4, 20, 24.6

Draw an ordered stem and leaf diagram to show this information, including a key.

1	9.5
2	0 1.7 4.5 4.6 9
3	1 1.4
4	3
5	3.2 3.7 9.3

key
 $2|0 = \pounds 20,000$

a) Find the range of wages at the company.

$$\begin{aligned} &59300 - 19500 \\ &= 39800 \end{aligned}$$

Answer: 39800
(1 mark)

b) Find the median annual wage

Median lies between 6th and 7th values:

$$\begin{aligned} &29, 31 \\ \rightarrow &\frac{29 + 31}{2} = 30 \end{aligned}$$

Answer: £30,000
(1 mark)

c) Find the probability that a randomly selected employee earns less than £30,000 a year.

$$\frac{6}{12}$$

Answer: $\frac{1}{2}$
(2 marks)



d) Due to an error, the employee who earns £29,000 should be earning £500 less than this. Does this affect the median? Explain your choice.

Yes. It should now be
$$\frac{28500 + 31000}{2} = 29750$$

Answer: £29750
(1 mark)