

Statistics GCSE**Paper 2**

Edexcel Foundation - 2026

Foundation Tier

Variant 5

1ST0/2F

Instructions

- Write all answers in the spaces provided.
- Answer all questions.
- You must show all your working.
- There may not be enough space to show all your working out.

Information

- This is a practise paper to aid your revision for your exams.
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Advice

- You can get support for all these questions at our website: www.statsgcse.com
- This paper and more are available on our site with questions that change subtly after each attempt.
- Good luck!

1



Liam has 6 number tiles shown above.

All of the tiles are placed inside a bag then a random tile is drawn from the bag.

- (a) Select the word describes the likelihood that the tile has a 2 on it.

(1 mark)

Select **one** box.

- evens
 unlikely
 certain
 likely
 impossible

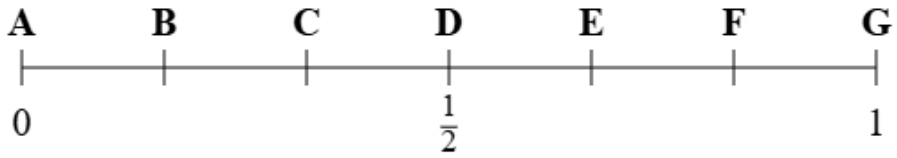
- (b) Select the word describes the likelihood that the tile has a number less than 5 on it.

(1 mark)

Select **one** box.

- impossible
 unlikely
 certain
 likely
 evens

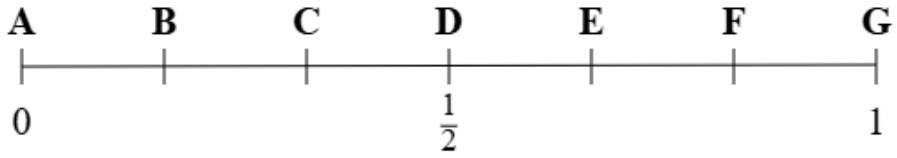
(c)



Using the probability scale, write down the letter that shows probability that the tile has a 2 on it.

(1 mark)

(d)



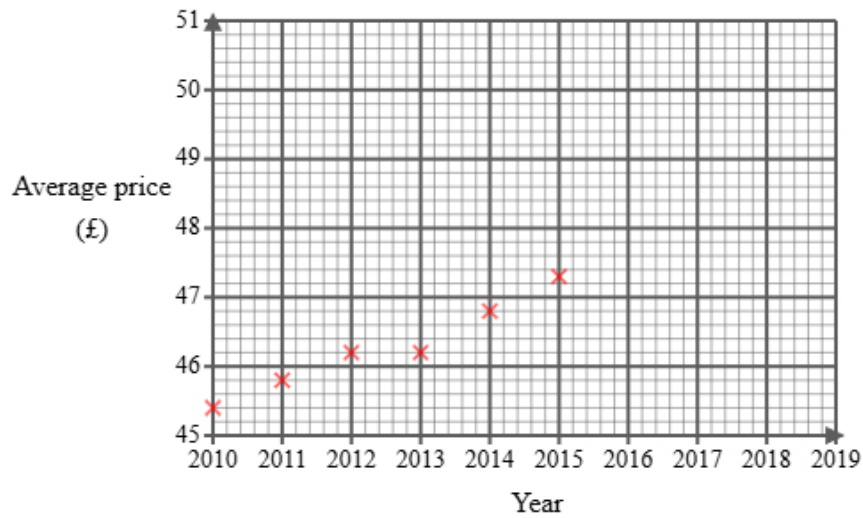
Using the probability scale, write down the letter that shows probability that the tile has a 1 or a 3 on it.

(1 mark)

2 Noah found the following information about the average price of a concert ticket in England.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Average price (£)	45.40	45.80	46.20	46.20	46.80	47.30		47.80	48.00	48.50

He did not find the price for 2016 and has started to draw a graph for the data.



Noah then used statistical software to calculate the equation for the trend line.

- (a) (i) Plot the average price for each of 2017, 2018 and 2019
(ii) Draw a trend line for Noah's data
(iii) Describe the trend in the average price of a concert ticket in the UK from 2010 to 2019

(4 marks)

(b) The gradient of Noah's trend line is 0.34

Interpret this gradient.

(1 mark)

(c) Explain whether or not the scale used on the 'average price' axis could make the graph misleading.

(2 marks)

(d) Noah draws the trend line onto the graph.




He suggests that the trend line could be used to estimate the average price for 2016 **and** 2020

Explain whether each of these estimates would be reliable.


You should **not** work them out.

(3 marks)

- 3 An electronics store tracks how many headphones are sold each day. This helps them forecast demand and adjust their inventory levels.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:

 represents 8 headphones

- (a) On Thursday, the number of headphones sold was 24.

Show this information on the pictogram.

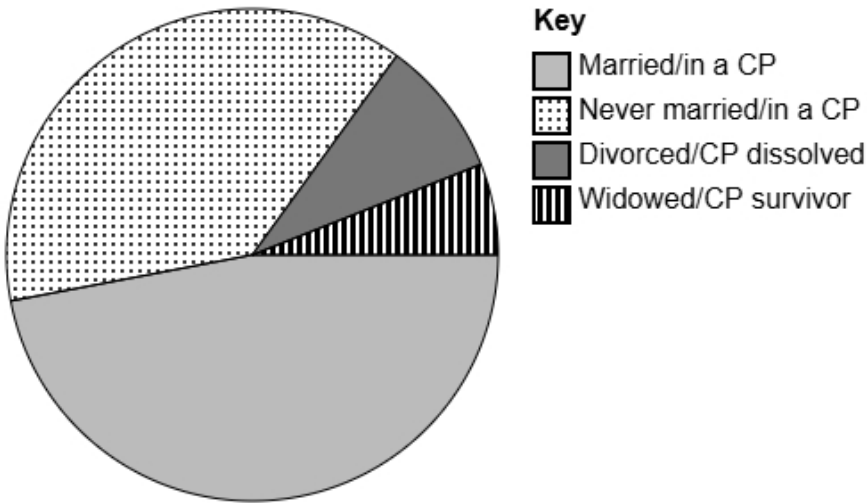
(1 mark)

- (b) Trent suggests redrawing the pictogram using a key with a whole-circle representing 5 headphones.

Explain why this key would **not** be suitable.

(1 mark)

- 4 The accurately drawn pie chart shows information about the proportion of adults who are married or in a civil partnership (CP) in England and Wales in 2021.



- (a) Explain how you can tell that most adults in 2021 were married or in a civil partnership using the pie chart.

(1 mark)

- (b) The population in the England and Wales in 2021 was estimated to be 60 million.

Calculate an estimate for the number of adults in England and Wales in 2021 who were 'Never married/in a CP'.

Round your answer to the nearest million.

(2 marks)

_____ million

5 Mia owns a computer game store.

She wants to collect information about types of computer games liked by people in her city.

The following list gives the information she is going to collect about people's favourite computer games:

game genre

average play time

number of players

(a) Select the information that is categorical data from the list.

(1 mark)

(b) Select the information that is discrete data from the list.

(1 mark)

(c) Mia would like to send a questionnaire to 40 of her customers.

She has a list of all 200 of her customers.

Explain how Mia can select a systematic sample of 40 people from her list of customers.

(2 marks)

6 Ava is a student and wants to study favourite sports.
She would like to find out the most popular sport in her school.

Ava decides to do convenience sampling outside the school gate an hour after school and uses the data collection sheet shown here:

Sport	Tally
Football	
Basketball	
Tennis	
Swimming	

(a) State the population for this study.

(1 mark)

(b) Describe what is meant by a convenience sample.

(1 mark)

(c) Give **one** disadvantage of convenience sampling.

(1 mark)

(d) Discuss whether this data collection sheet is appropriate for Ava to collect the data.

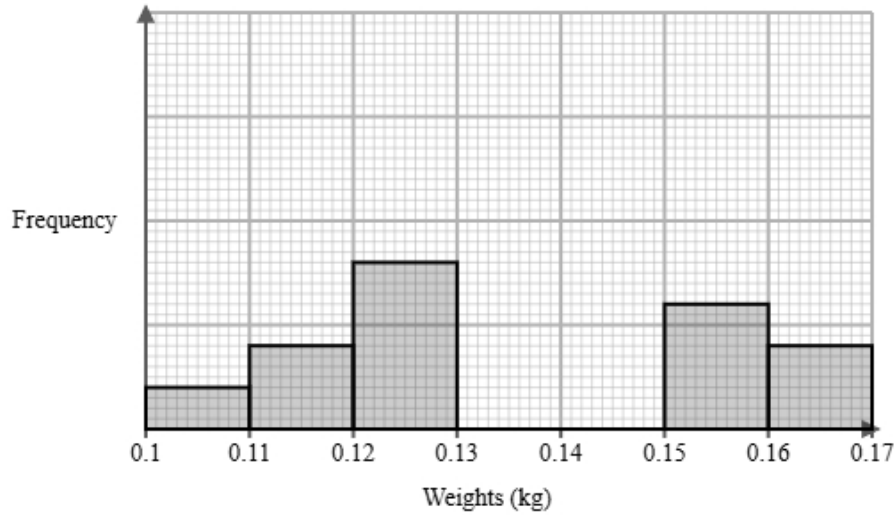
(2 marks)

(e) After collecting the data, Ava would like to display the data in a diagram.

Discuss whether or not a stem and leaf diagram would be suitable.

(2 marks)

- 8** A pet shop owner measured the weights of Syrian hamsters and Roborovski hamsters in their pet shop. They recorded the weights after 3 months. The incomplete histogram and grouped frequency table give information about the weights of Syrian hamsters in their pet shop.



Weights w (kg)	Frequency
$0.10 < w \leq 0.11$	2
$0.11 < w \leq 0.12$	4
$0.12 < w \leq 0.13$	8
$0.13 < w \leq 0.14$	12
$0.14 < w \leq 0.15$	9
$0.15 < w \leq 0.16$	
$0.16 < w \leq 0.17$	

- (a) Use the information in the histogram to complete the table.

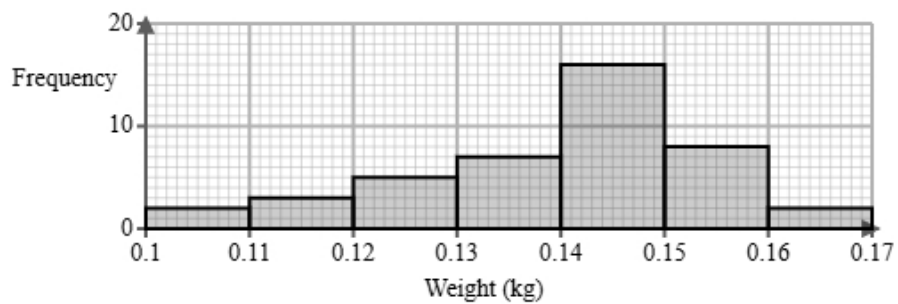
(2 marks)

Weights w (kg)	Frequency
$0.10 < w \leq 0.11$	2
$0.11 < w \leq 0.12$	4
$0.12 < w \leq 0.13$	8
$0.13 < w \leq 0.14$	12
$0.14 < w \leq 0.15$	9
$0.15 < w \leq 0.16$	_____
$0.16 < w \leq 0.17$	_____

(b) Use the information in the table to complete the histogram.

(2 marks)

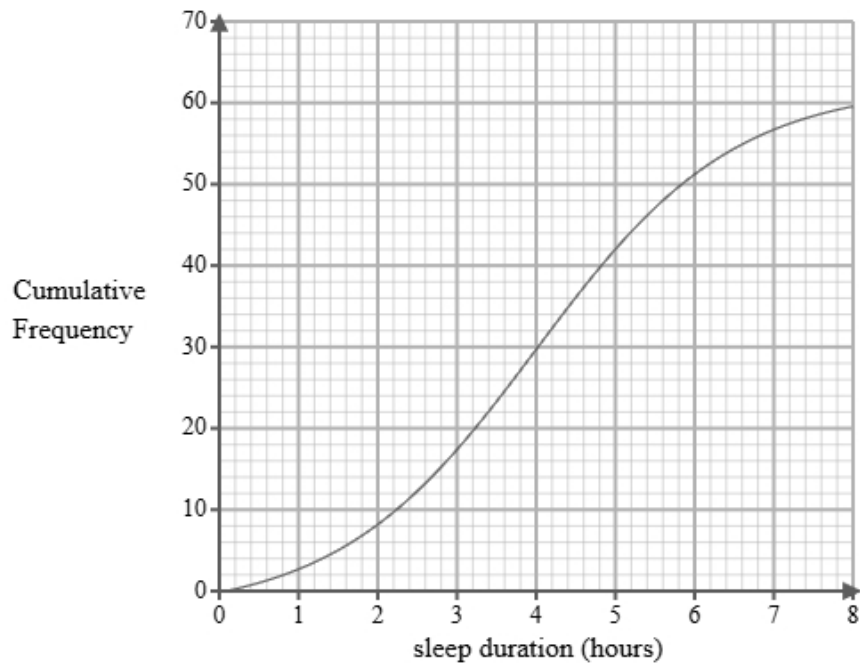
(c) The histogram below shows data on the weights of Roborovski hamsters after 3 months.



Identify and interpret the type of skew shown in the histogram for Roborovski hamsters.

(2 marks)

- 9 A researcher measures the number of hours that 60 students sleep on a specific Saturday. A cumulative frequency diagram is drawn from the data.



Complete the table below from the cumulative frequency diagram.

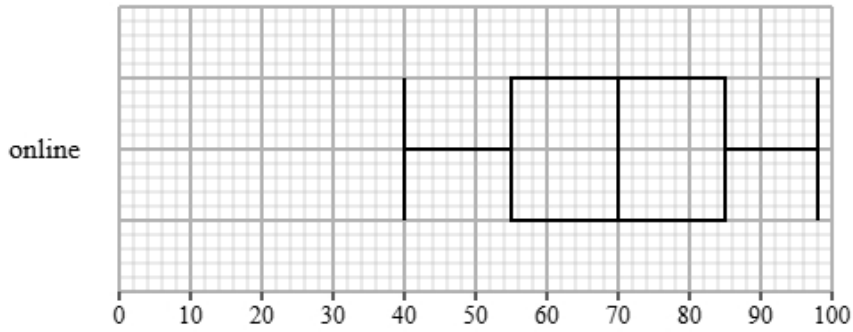
Lower quartile	Median	Upper quartile

(2 marks)

10 Isla collected the satisfaction scores for online and in-store customers.

Both types of shopping experiences were rated by the same number of customers.

The box plot presents data on the satisfaction scores for the online customers.

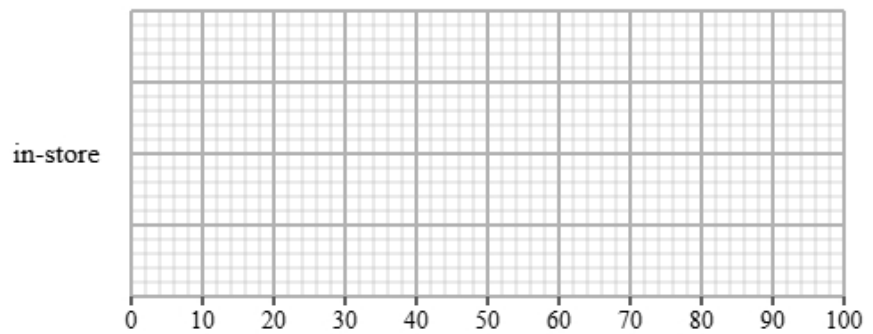


The table gives information about the satisfaction scores for the in-store customers.

Least tall	Lower quartile	Median	Upper quartile	Most tall
40	60	80	85	90

(a) Draw a box plot for the satisfaction scores for the in-store customers.

(2 marks)

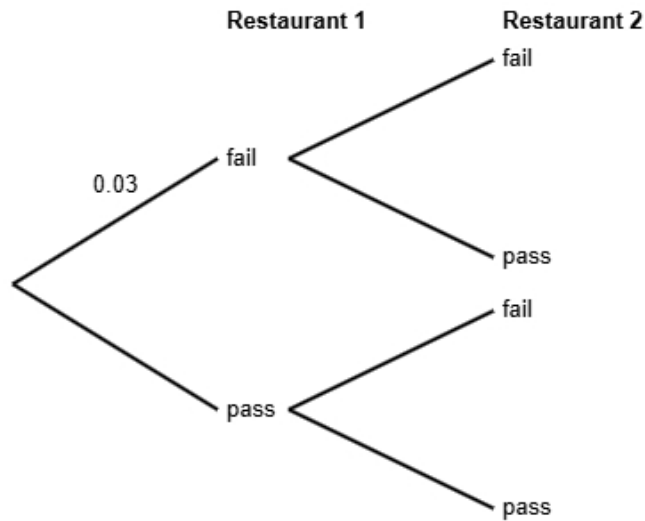


(b) Compare the two distributions of satisfaction scores.

Give three comparisons and interpret one of these comparisons.

(4 marks)

- 11** Health inspections show that 3% of restaurants in a city fail basic hygiene standards.
 The rest pass the required health standards.
 Emma is a food safety officer and will be inspecting two different restaurants.
 She does not know if each restaurant will fail or pass.



- (a)** Complete the probability tree diagram.

(2 marks)

- (b)** Find the probability that both of Emma's restaurants have an outcome of pass.

(2 marks)

- (c) Emma states that the probability that exactly one restaurant outcome is fail is less than 6%
Find out whether or not Emma is correct.

(3 marks)

12 The table shows information about office spaces in Leeds.

number of desks	number of offices
1	120
2	220
3	740
4	400
5 or more	220
Total	1700

A researcher wants to investigate the price of these office spaces and takes a stratified sample of 85 office spaces according to the number of desks.

(a) The researcher says the mode of the number of desks for these office spaces is 3.

Explain how the researcher knows this.

(1 mark)

(b) Work out the number of offices in the sample for each number of desks.

number of desks	number of offices in the sample
1	
2	
3	
4	
5 or more	

(3 marks)

(c) Describe how the 85 office spaces in the sample should be selected.

(3 marks)

- 13** Mei works for a marine conservation group. She has been tasked with investigating plastic waste collected by divers.

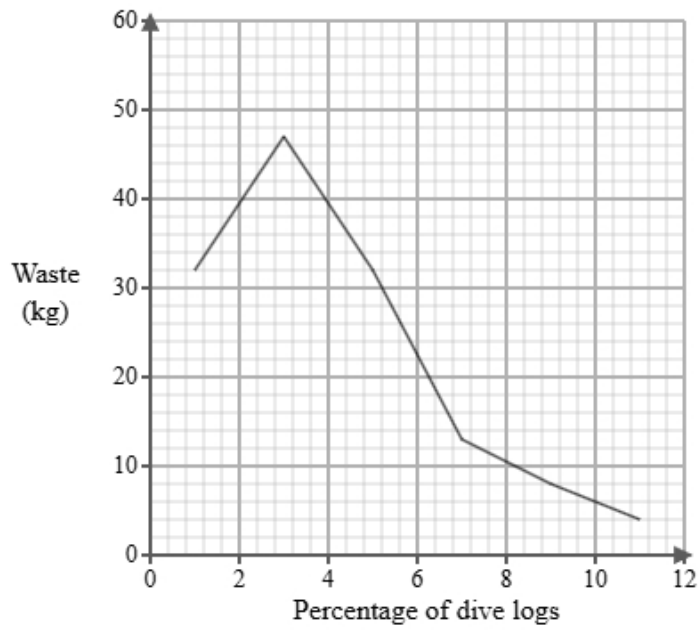
Below is a section of the spreadsheet she used to record her findings.

Waste (kg)	Percentage of dive logs
$0 < p \leq 2$	7
$2 < p \leq 4$	seven
$4 < p \leq 6$	6
$6 < p \leq 8$	118
$8 < p \leq 10$	47
$10 < p \leq 12$	15
Total	100

Mei cleans the data to create the table below.

Waste (kg)	Percentage of dive logs
$0 < p \leq 2$	7
$2 < p \leq 4$	7
$4 < p \leq 6$	6
$6 < p \leq 8$	18
$8 < p \leq 10$	47
$10 < p \leq 12$	15
Total	100

A frequency polygon has been drawn for metal waste collected by divers.



- i) On the same graph, draw the frequency polygon for plastic waste collected by divers.
- ii) Using the two frequency polygons, compare the skew of the distributions and explain what your comparison means in context.

(4 marks)

- 14 The table shows information about the consumer price index (CPI) and average cost of bread (pence) in the United Kingdom for Jan 1990, Jan 2000 and Jan 2010.

	Jan 1990	Jan 2000	Jan 2010
consumer price index	100	130	160
average cost of bread (pence)	65	70	110

Describe how the increase in average cost of bread (pence) compares with the CPI over the ten years to Jan 2000 and over the twenty years to Jan 2010.

(5 marks)

15 Emma is investigating how the engine hours used, x , affects the resale price (£), y for two types of boats, brand A and brand B.

She found ten boats of each type and recorded their engine hours used and resale price and plotted each on scatter diagrams.

She then drew a line of best fit on each diagram and found the gradient and y -intercept of each line.

Here are the results:

Brand	Gradient of line of best fit	y -intercept of line of best fit
A	-200	30000
B	-150	38000

Interpret and compare these results in context.

(5 marks)
