

Statistics GCSE

Paper 2

Edexcel Foundation - 2026

Foundation Tier

Variant 1 (same as video)

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.
- This site, and all that work on it, have no affiliation or relationship with any exam board.
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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



Ethan 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.

- unlikely
- likely
- certain
- evens
- impossible

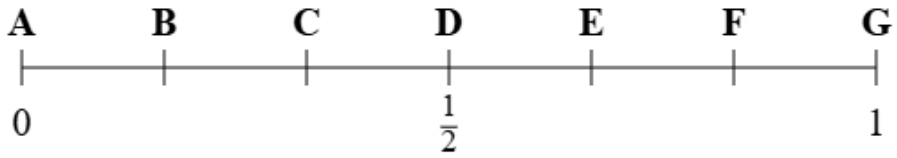
- (b) Select the word describes the likelihood that the tile has a 4 on it.

(1 mark)

Select **one** box.

- unlikely
- certain
- likely
- evens
- impossible

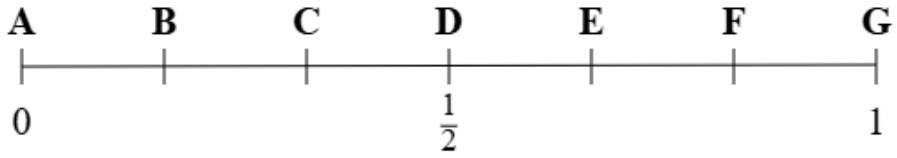
(c)



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

(1 mark)

(d)



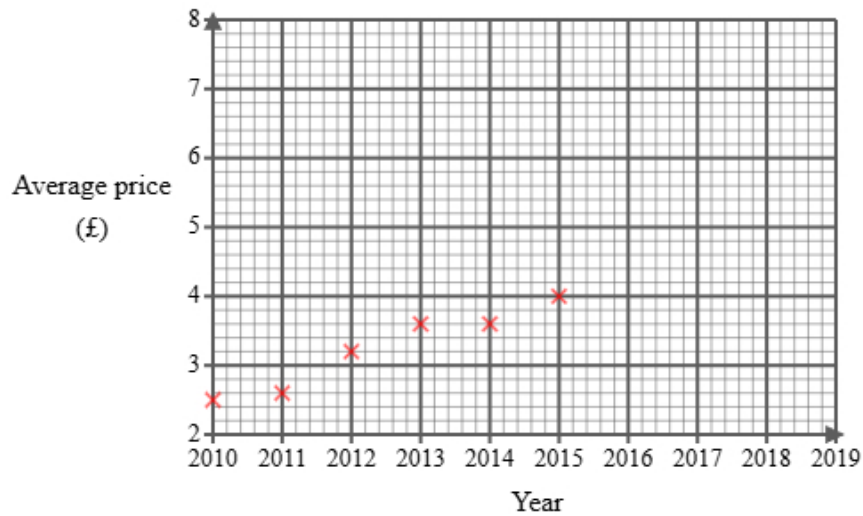
Using the probability scale, write down the letter that shows probability that the tile has a 2 or a 3 on it.

(1 mark)

2 Omar found the following information about the average price of a single bus fare in England.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Average price (£)	2.50	2.60	3.20	3.60	3.60	4.00		4.80	5.00	5.50

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



Omar 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 Omar's data
(iii) Describe the trend in the average price of a single bus fare in the UK from 2010 to 2019

(4 marks)

(b) The gradient of Omar's trend line is 0.33

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) Omar 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 A bakery tracks the number of loaves of bread sold from Monday to Thursday. This helps them understand which days are busier and plan their stock accordingly.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:



represents 8 loaves of bread

- (a) On Thursday, the number of loaves of bread sold was 32.

Show this information on the pictogram.

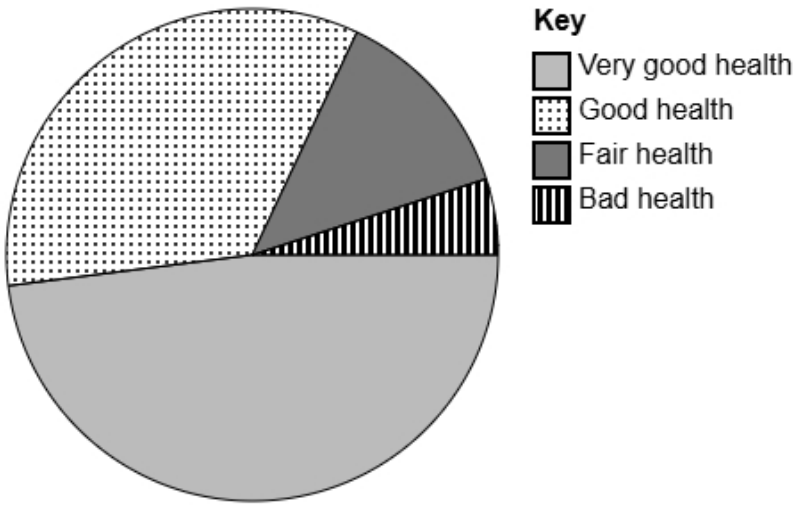
(1 mark)

- (b) Felix suggests redrawing the pictogram using a key with a whole-square representing 5 loaves of bread.

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

(1 mark)

4 The accurately drawn pie chart shows information about how people in the UK rated their health in 2021.



(a) Explain how you can tell that most people viewed themselves as 'Very good health' in the UK in 2021 using the pie chart.

(1 mark)

(b) The population in the UK in 2021 was estimated to be 67 million.

Calculate an estimate for the number of people in the UK in 2021 who rate themselves as having 'Good health'.

Round your answer to the nearest million.

(2 marks)

_____ million

5 Sarah owns a cinema.

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

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

genre

average movie length

minimum age rating

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

She has a list of all 200 of her customers.

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

(2 marks)

6 Mia is a student and wants to study after-school hobbies.

She would like to find out the most common after-school hobby in her school.

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

Hobby	Tally
Reading	
Gaming	
Sport	
Music	

(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 Mia to collect the data.

(2 marks)

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

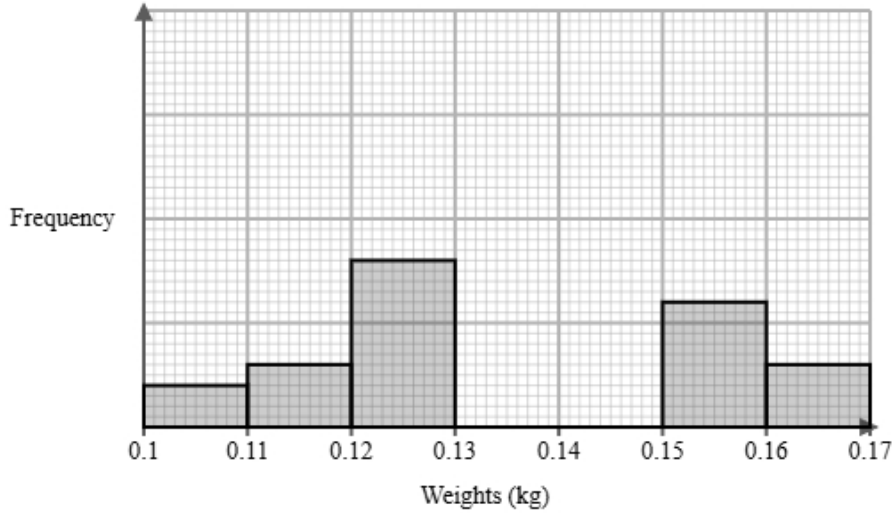
Discuss whether or not a stem and leaf diagram would be suitable.

(2 marks)

8 An orchard manager measured the weights of red apples and green apples in region A.

They recorded the weights after 6 months.

The incomplete histogram and grouped frequency table give information about the weights of red apples in region A.



Weights w (kg)	Frequency
$0.10 < w \leq 0.11$	2
$0.11 < w \leq 0.12$	3
$0.12 < w \leq 0.13$	8
$0.13 < w \leq 0.14$	14
$0.14 < w \leq 0.15$	9
$0.15 < w \leq 0.16$	
$0.16 < w \leq 0.17$	

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

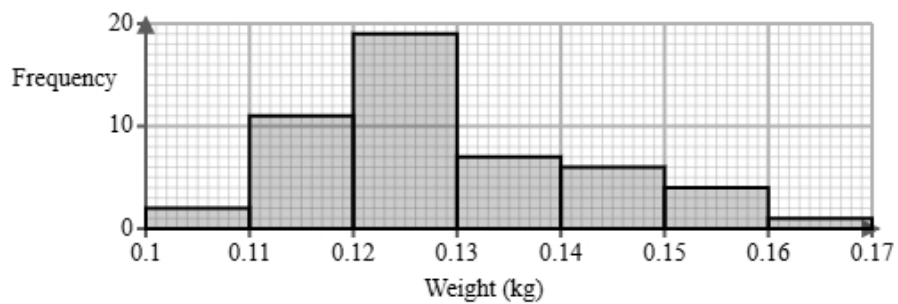
(2 marks)

Weights w (kg)	Frequency
$0.10 < w \leq 0.11$	2
$0.11 < w \leq 0.12$	3
$0.12 < w \leq 0.13$	8
$0.13 < w \leq 0.14$	14
$0.14 < w \leq 0.15$	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)

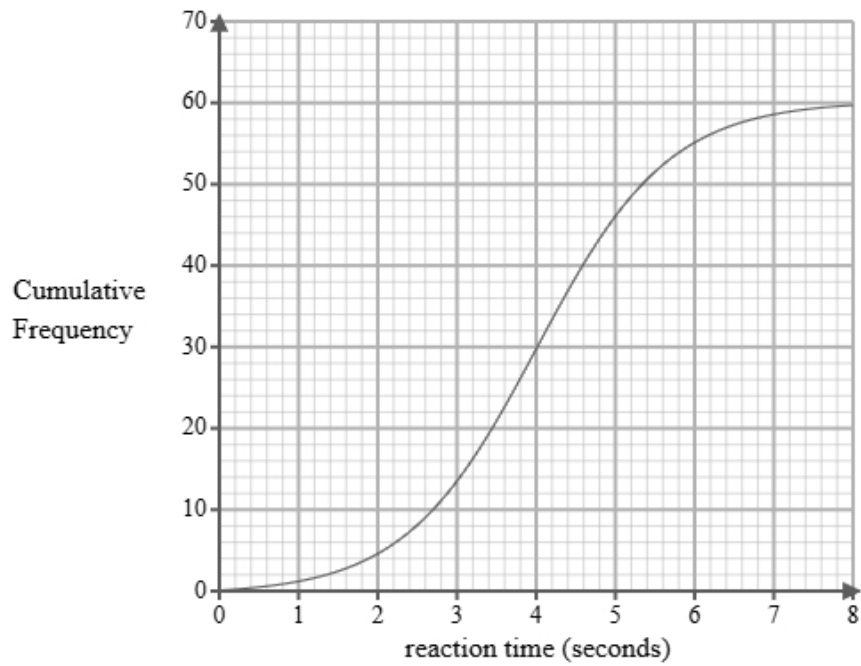
(c) The histogram below shows data on the weights of green apples after 6 months.



Identify and interpret the type of skew shown in the histogram for green apples.

(2 marks)

- 9 A researcher measures the reaction times, in seconds, of 60 students completing a computer task. A cumulative frequency diagram is drawn from the data.



Complete the table below from the cumulative frequency diagram.

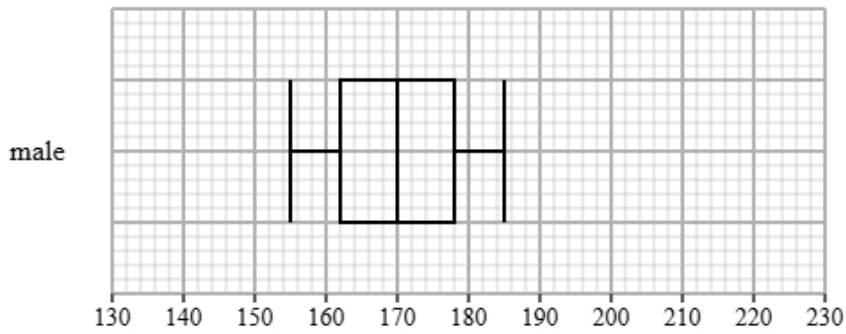
Lower quartile	Median	Upper quartile

(2 marks)

10 Sophie recorded the heights of male and female students in a school.

Both groups were measured using the same method.

The box plot shows information about the heights for the male students.

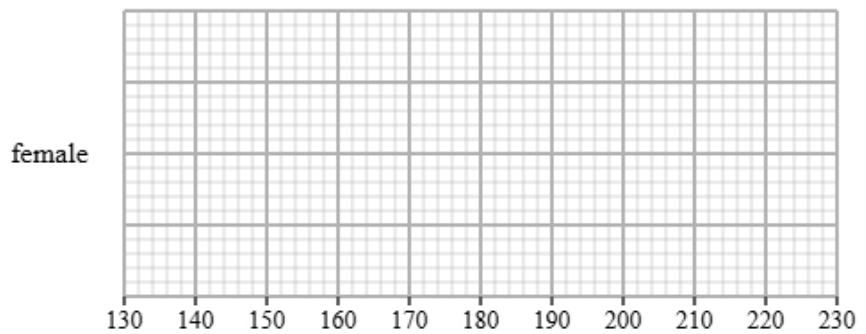


The table gives information about the heights for the female students.

Least tall	Lower quartile	Median	Upper quartile	Most tall
150	158	162	172	190

(a) Draw a box plot for the heights for the female students.

(2 marks)



(b) Compare the two distributions of heights.

Give three comparisons and interpret one of these comparisons.

(4 marks)

- (c) David states that the probability that exactly one of the tests is false positive is less than 4%
Find out whether or not David is correct.

(3 marks)

12 The table shows information about cars for sale in Cambridge.

number of doors	number of cars
2	340
3	180
4	260
5	520
6 or more	500
Total	1800

A researcher wants to investigate the price of these cars and takes a stratified sample of 90 cars according to the number of doors.

(a) The researcher says the mode of the number of doors for these cars is 5.

Explain how the researcher knows this.

(1 mark)

(b) Work out the number of cars in the sample for each number of doors.

number of doors	number of cars in the sample
2	
3	
4	
5	
6 or more	

(3 marks)

(c) Describe how the 90 cars in the sample should be selected.

(3 marks)

- 13 Aisha works for an environmental agency. She has been tasked with investigating air pollution levels near schools.

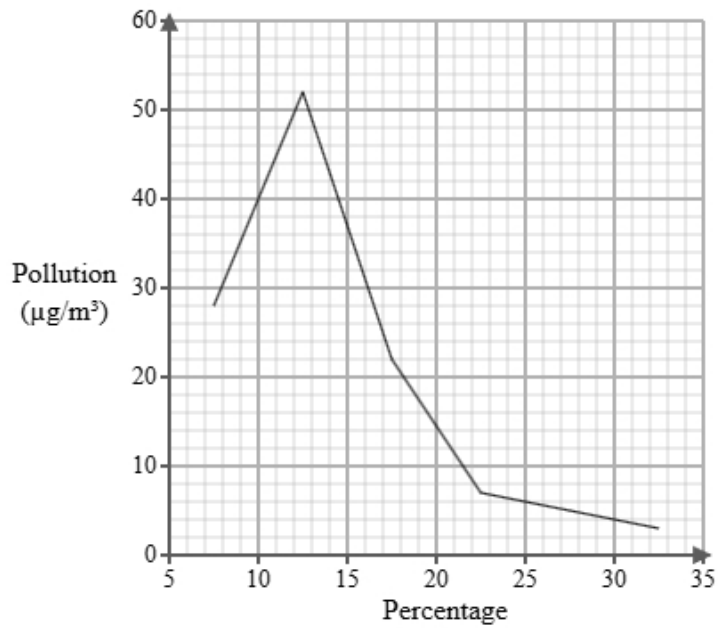
Below is a section of the spreadsheet she used to record her findings.

Pollution ($\mu\text{g}/\text{m}^3$)	Percentage
$5 < p \leq 10$	6
$10 < p \leq 15$	eight
$15 < p \leq 20$	8
$20 < p \leq 25$	117
$25 < p \leq 30$	48
$30 < p \leq 35$	13
Total	100

Aisha cleans the data to create the table below.

Pollution ($\mu\text{g}/\text{m}^3$)	Percentage
$5 < p \leq 10$	6
$10 < p \leq 15$	8
$15 < p \leq 20$	8
$20 < p \leq 25$	17
$25 < p \leq 30$	48
$30 < p \leq 35$	13
Total	100

A frequency polygon has been drawn for air pollution levels near parks.



- i) On the same graph, draw the frequency polygon for air pollution levels near schools.
- 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 TV Licence price (£) in the United Kingdom for Jan 2000, Jan 2010 and Jan 2020.

	Jan 2000	Jan 2010	Jan 2020
consumer price index	100	123	153
TV Licence price (£)	104	145.5	157.5

Describe how the increase in TV Licence price (£) compares with the CPI over the ten years to Jan 2010 and over the twenty years to Jan 2020.

(5 marks)

15 Sarah is investigating how the age in years, x , affects the resale price (£), y for two types of laptops, model A and model B.

She found ten laptops of each type and recorded their age 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:

Model	Gradient of line of best fit	y-intercept of line of best fit
A	-120	1500
B	-95	2000

Interpret and compare these results in context.

(5 marks)
