



Rewarding Learning

General Certificate of Secondary Education
2019

Centre Number

--	--	--	--	--

Candidate Number

--	--	--	--

Statistics

Unit 1
Foundation Tier



GST11

[GST11]

THURSDAY 13 JUNE, AFTERNOON

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Answer **all ten** questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

You **may** use a calculator for this paper.

INFORMATION FOR CANDIDATES

The total mark for this paper is 80.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

You should have a calculator, ruler, compasses and protractor.

There is no formula sheet for this examination.

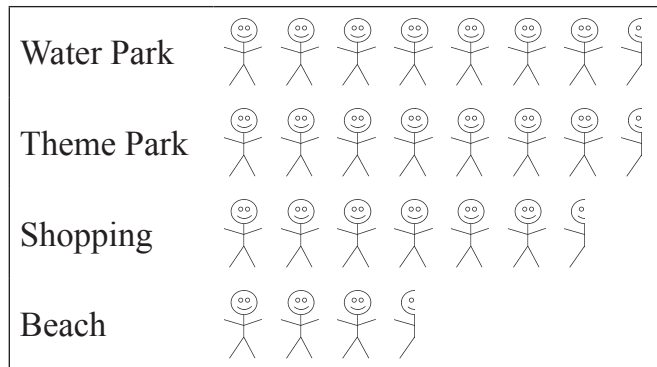
For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
Total Marks	

Answer **all** questions

- 1 Some pupils are going on a school trip. Their teacher wants to find out which activity they would like to take part in during their free afternoon.

The pictogram and table below show the choices made by all of the pupils.

KEY  represents 2 pupils



Choice	Boys	Girls
Water Park	12	3
Theme Park	7	8
Shopping	2	11
Beach	5	2
TOTAL	26	24

- (a) How many pupils are going on the trip?

Answer _____ [1]

- (b) What percentage of the pupils chose shopping?

Answer _____ [2]

Disadvantage _____

_____ [1]

Examiner Only	
Marks	Remark

	Children	Adults
Male	10	11
Female	9	
TOTAL		31

(i) how many children visited the library?

Answer _____ [1]

(ii) how many females visited the library?

Answer _____ [1]

(iii) how many people visited the library?

Answer _____ [1]

Examiner Only	
Marks	Remarks

- 3 A journalist is carrying out a survey about the average number of children in a family.

Here is a list of the number of children in a sample of families from Newtownards.

2 2 0 1 1 1 4 2
3 1 3 2 6 1 0 1

- (a) Complete the frequency table below to show this data.

Number of children	Tally	Frequency
0		
1		
2		
3		
4		
5		
6		

[2]

- (b) (i) Would a bar chart be appropriate to represent this data?

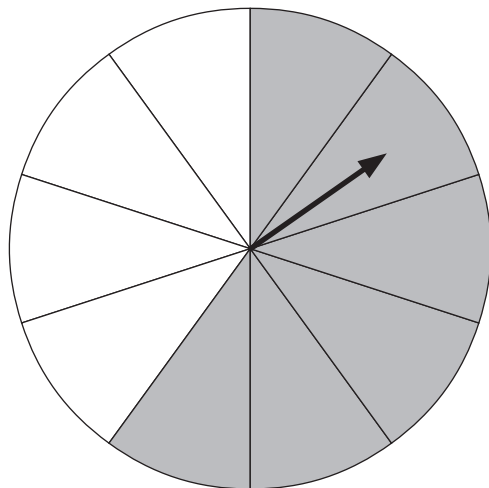
Yes ☐No ☐

[1]

- (ii) Give a reason for your answer.

Reason _____

_____ [1]



- Answer [1]

Examiner Only	
Marks	Remarks

BLANK PAGE
(Questions continue overleaf)

- 5 David asked 45 pupils in his year group, “What is your favourite type of film?”

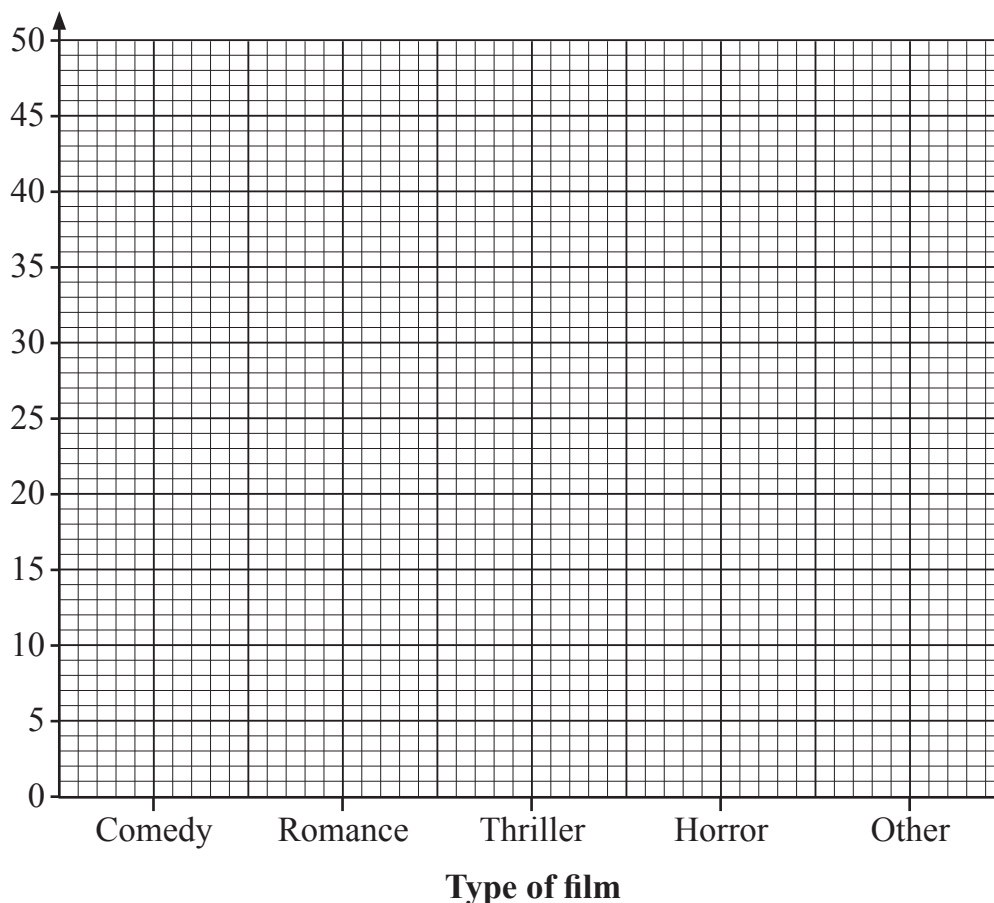
Sarah asked 50 pupils in her year group the same question.

Some of their results are shown in the table below.

Type of film	Number of pupils		Percentage of pupils (%)	
	David	Sarah	David	Sarah
Comedy	14	18	31	36
Romance			18	14
Thriller	6	21	13	42
Horror	9	3	20	6
Other	8	1	18	2

- (a) Complete the missing values in the table. [2]

- (b) Draw an appropriate multiple bar chart to display the information in the table above. [4]



© Crown copyright - www.gov.uk

(a) Name these two areas.

(b) Does the area of England with the highest employment rate have the lowest unemployment rate?

Yes ☐ **No** ☐ [1]

12298

- 7 Cathal is doing some research about dental services offered in a number of large towns in Northern Ireland.

He decides to do a survey among all dental surgeries in a sample of five towns in Northern Ireland.

- (a) Name this method of sampling.

_____ [1]

Cathal gets a list of 35 towns in Northern Ireland.

01 Antrim	08 Bangor	15 Donaghadee	22 Larne	29 Omagh
02 Ballycastle	09 Carrickfergus	16 Downpatrick	23 Limavady	30 Portadown
03 Ballyclare	10 Carryduff	17 Dundonald	24 Lurgan	31 Portrush
04 Ballymena	11 Coalisland	18 Dungannon	25 Magherafelt	32 Portstewart
05 Ballymoney	12 Coleraine	19 Enniskillen	26 Newcastle	33 Randalstown
06 Ballynahinch	13 Comber	20 Holywood	27 Newtownabbey	34 Strabane
07 Banbridge	14 Cookstown	21 Kilkeel	28 Newtownards	35 Warrenpoint

- (b) Using the random numbers below, starting at 72 and working to the right, write down the numbers and names of the five towns Cathal will include in his sample.

72 08 43 22 34 89 14 74 52 08
 97 66 16 39 01 35 57 61 80 15

Number	Town

[4]

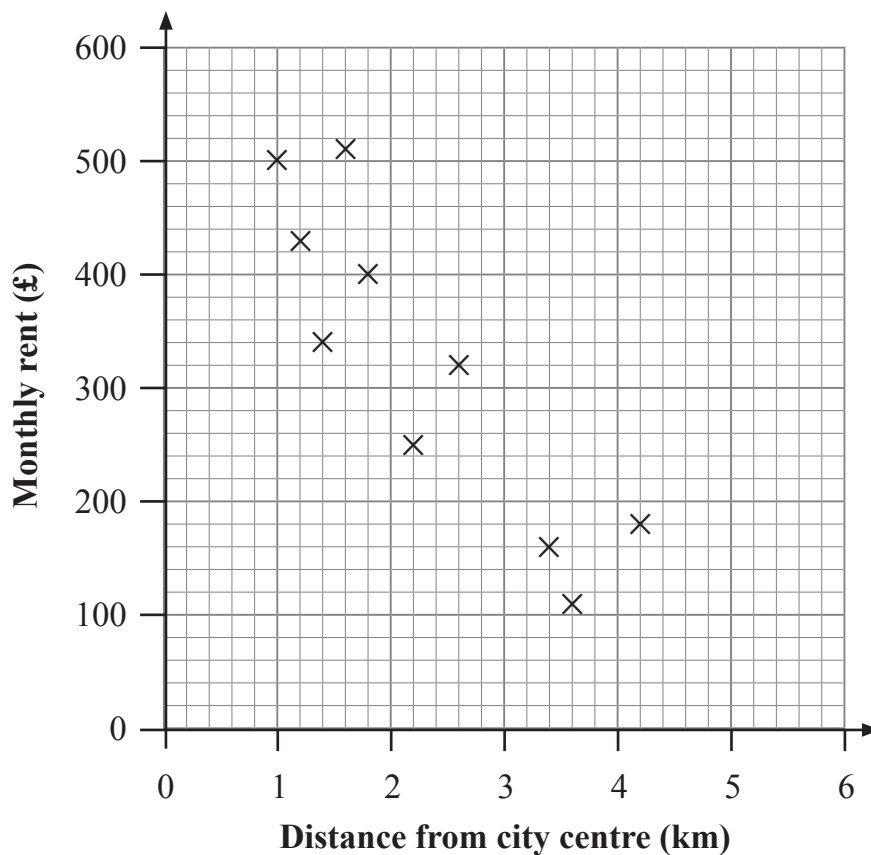
BLANK PAGE
(Questions continue overleaf)

[3]

-
-
-
-
-
-
- [4

[Turn over

- 9 The scatter diagram below shows some information about the monthly rent and distance from the city centre for 10 apartments in a city.



- (a) Show that the mean distance from the city centre is 2.3 km.

[2]

The mean monthly rent for the 10 apartments is £320

- (b) Plot the double mean point on the scatter diagram and draw a line of best fit.

[2]

- 10** Peter and Helen want to collect information about how much time pupils at their school spend on homework every week. They attend a large post-primary school with 1400 pupils.

Peter is planning to use systematic sampling to select 50 pupils.

- (a)** Describe how Peter could select his sample.

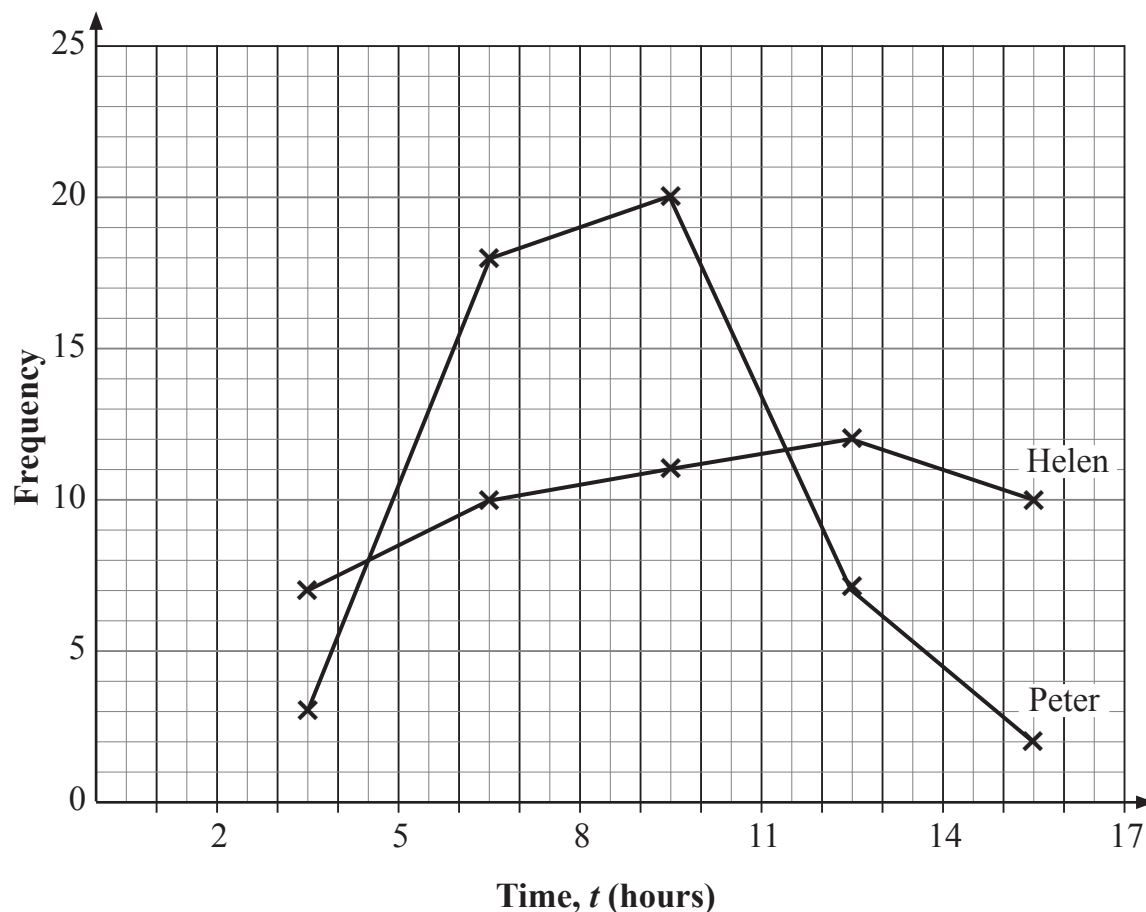
 [3]

Helen is planning to select 50 pupils from outside the canteen.

- (b)** Name the method of sampling which Helen is planning to use.

 [1]

Peter and Helen summarise their results in a frequency polygon.



Permission to reproduce all copyright material has been applied for.
In some cases, efforts to contact copyright holders may have been unsuccessful and CCEA
will be happy to rectify any omissions of acknowledgement in future if notified.