

Name

Class



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# Pie charts

(9 – 1) Topic booklet

## Higher

These questions have been collated from previous years GCSE Mathematics papers.

**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a **1H** question you are not allowed to use a calculator.
- If the question is a **2H** or a **3H** question, you may use a calculator to help you answer.

### Information

- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

### Advice

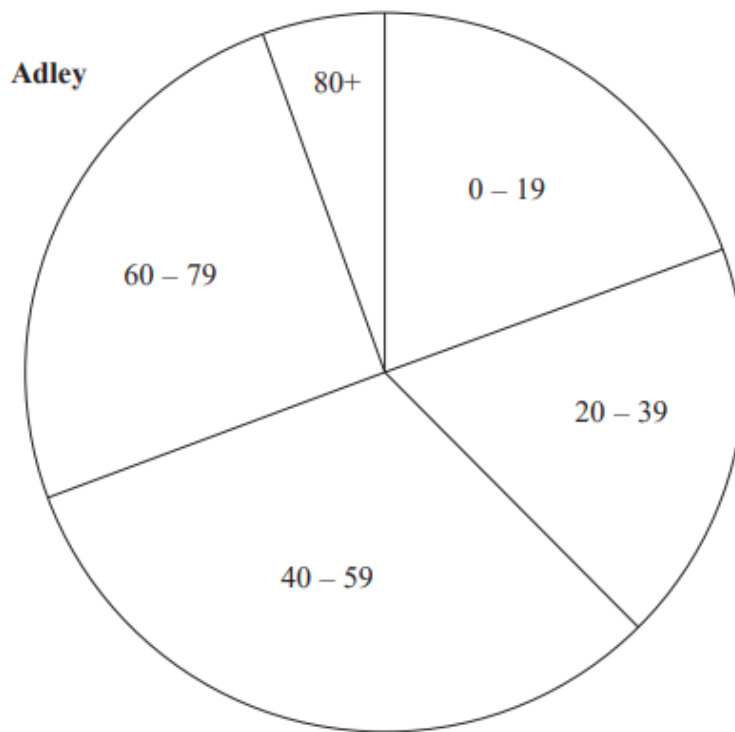
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

**Answer ALL questions**

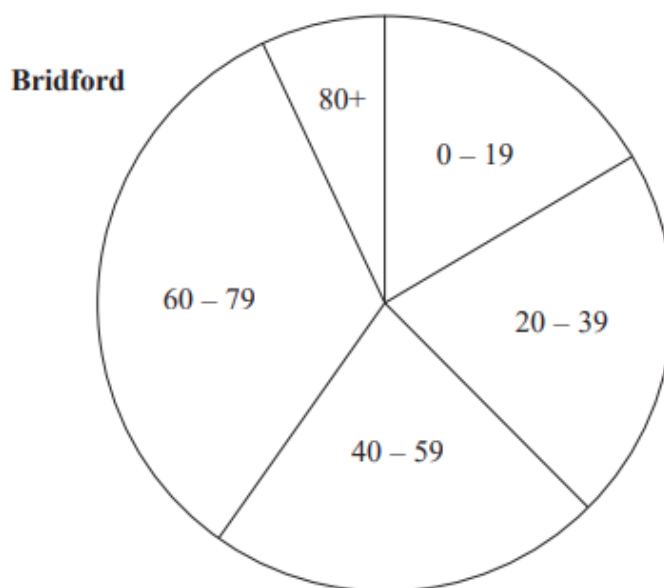
**Write your answers in the space provided.**

**You must write down all the stages in your working.**

- 11** The pie charts give information about the ages, in years, of people living in two towns, Adley and Bridford.



Diagrams  
accurately  
drawn



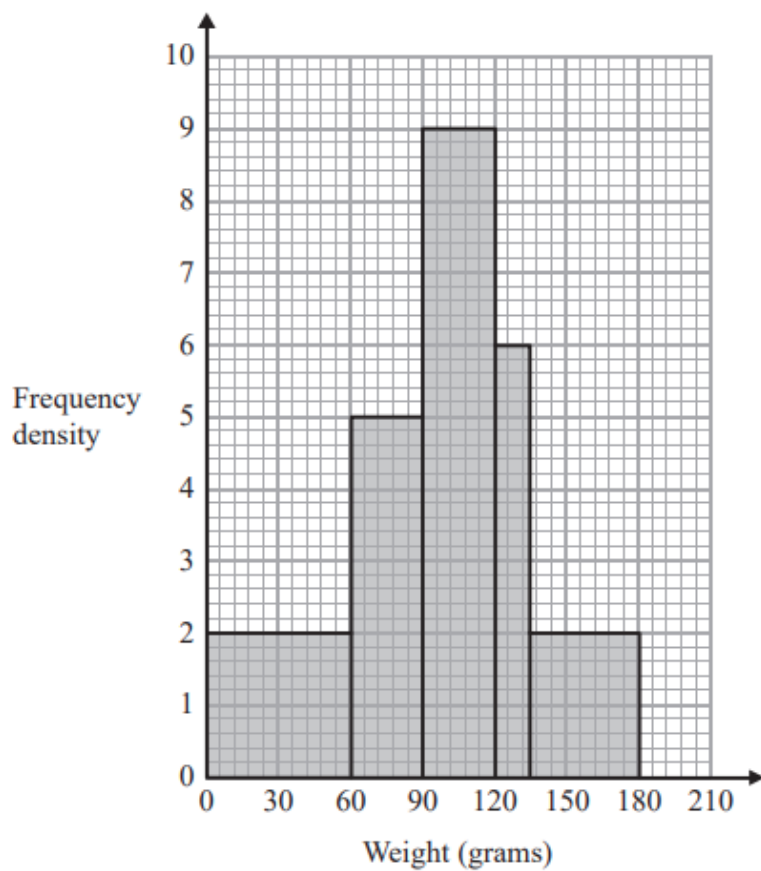
The ratio of the number of people living in Adley to the number of people living in Bridford is given by the ratio of the areas of the pie charts.



What proportion of the total number of people living in these two towns live in Adley **and** are aged 0 – 19?

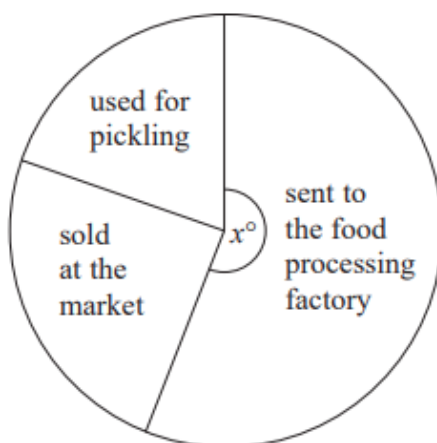
Give your answer correct to 3 significant figures.

21 The histogram gives information about the distribution of the weights of some onions grown by a farmer.



Onions less than 60 grams in weight are used for pickling.  
Onions greater than 120 grams in weight are sold at the market.  
The rest of the onions are sent to a food processing factory.

A pie chart is drawn using the information opposite to show what the farmer does with the onions he grows.



The angle of the sector for the onions sent to the food processing factory is  $x^\circ$ .

Work out the value of  $x$ .

$x = \dots\dots\dots$