

Centre Number						Candidate Number				
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Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Pages	Mark
2–3	
4–5	
6–7	
8–9	
10–11	
TOTAL	

In the style of



General Certificate of Secondary Education
Foundation Tier

Mathematics

43601F

Past Paper Questions by Topic

Pie Charts

F

<p>For this paper you must have:</p> <ul style="list-style-type: none"> mathematical instruments. <p>You must not use a calculator.</p>	
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Time allowed

- 1 hour 15 minutes

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is.
- The quality of your written communication is specifically assessed in questions indicated with an asterisk (*)
- You may ask for more answer paper and graph paper. These must be tagged securely to this answer booklet.

Advice

- In all calculations, show clearly how you work out your answer.

1 A car park is open from 9 am to 6 pm.

1 (a) (i) 80 cars enter between 9 am and 10 am.
One-quarter of these cars are white.
How many white cars enter between 9 am and 10 am?

.....

Answer (1 mark)

1 (a) (ii) 115 cars enter between 10 am and 11 am.
Tara says, "Exactly one-quarter of these cars are
white." Show that she is wrong.

.....

.....

(1 mark)

1 (b) A data logging machine counts cars entering and leaving the car park.

Hour ending at	Cars entering	Cars leaving
10 am	80	5
11 am	115	25
12 noon	75	40
1 pm	35	35
2 pm	50	50
3 pm	40	45
4 pm	20	65
5 pm	10	115
6 pm	5	30

1 (b) (i) The car park is empty at 9 am.
How many cars are in the car park at 10 am?

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Answer (1 mark)

1 (b) (ii) Traffic lights stop cars entering when the car park is full.
The car park is full at 12 noon.
How many cars are in the car park when it is full?

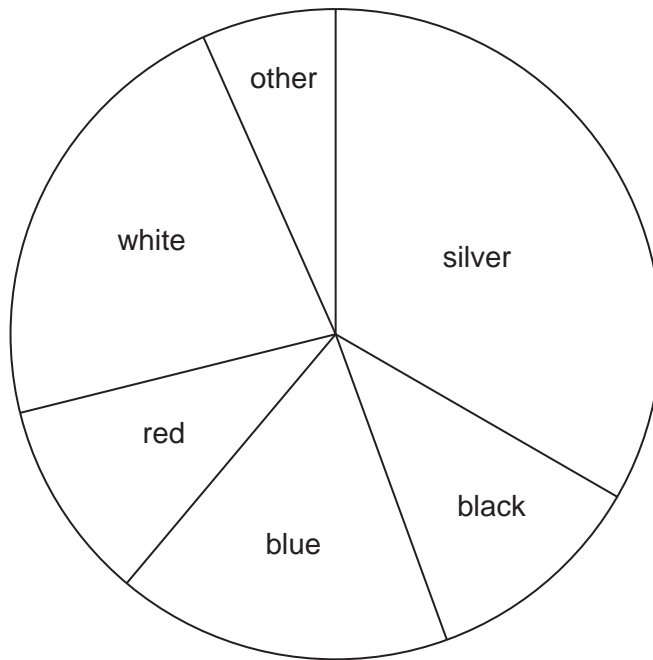
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Answer (3 marks)



1 (c) The pie chart shows information about the colours of the cars in the car park one day.



Complete the sentences.

1 (c) (i) There are twice as many cars as black cars. (1 mark)

1 (c) (ii) $\frac{1}{3}$ of the cars are (1 mark)

1 (d) Are there any pink cars in the car park on that day?
Tick a box.

Yes

No

Cannot tell

Give a reason for your answer.

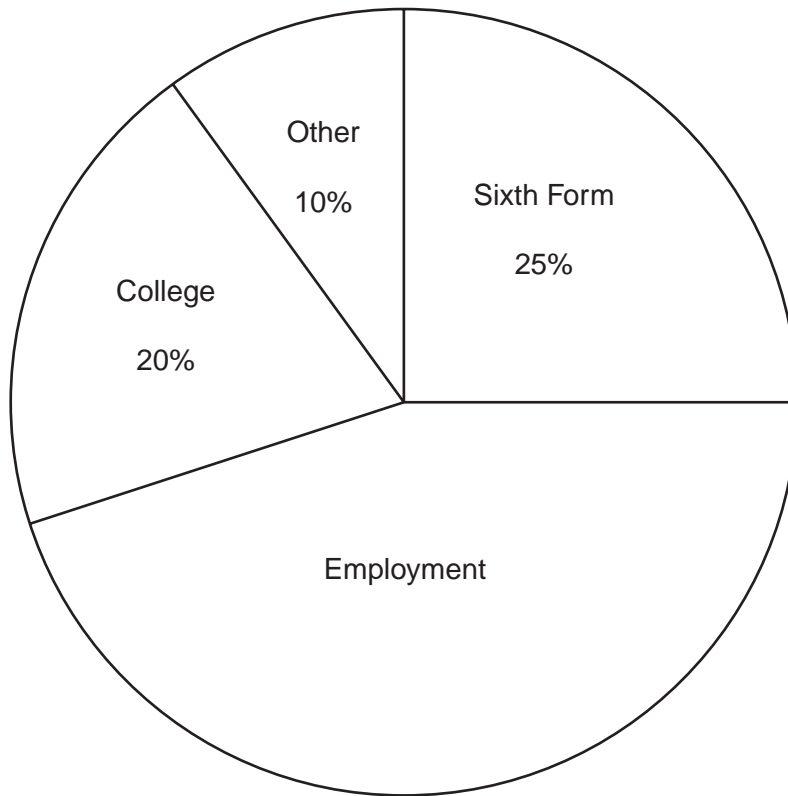
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(1 mark)



2 (a) The pie chart shows the destinations of 300 students from Year 11 in 1979.



2 (a) (i) Work out the percentage of the students who went into Employment.

.....
.....

Answer % (2 marks)

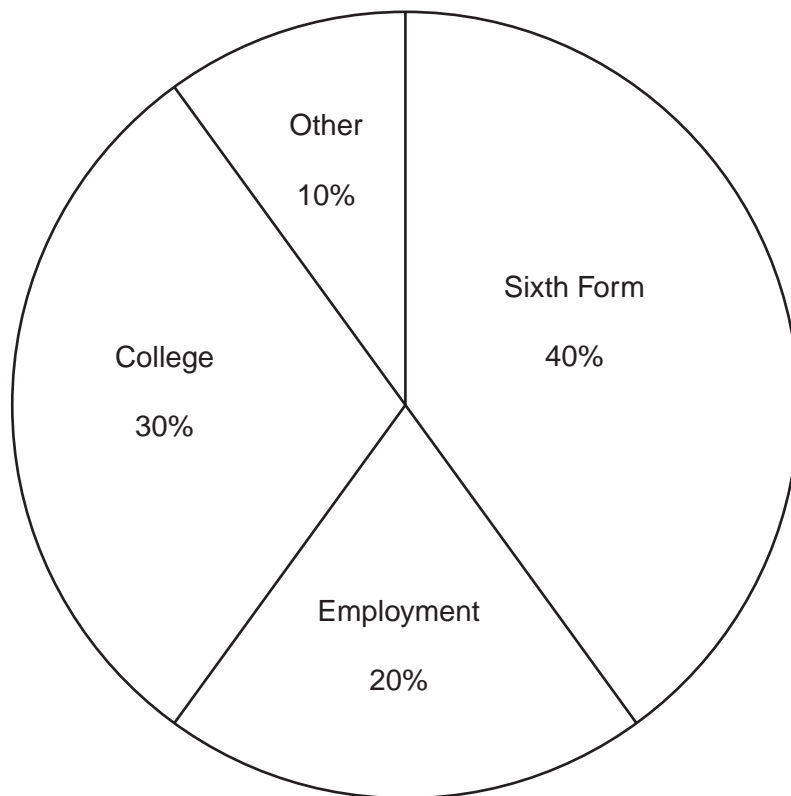
2 (a) (ii) Work out the number of students who went to College.

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Answer (2 marks)



3 (b) The pie chart shows the destinations of 300 students from Year 11 in 2009.



3 (b) What was the most popular destination in 2009?

Answer (1 mark)

3 (c) The pie charts show changes in the destinations of the students.

Write down **two** changes that have happened by 2009.

Change 1

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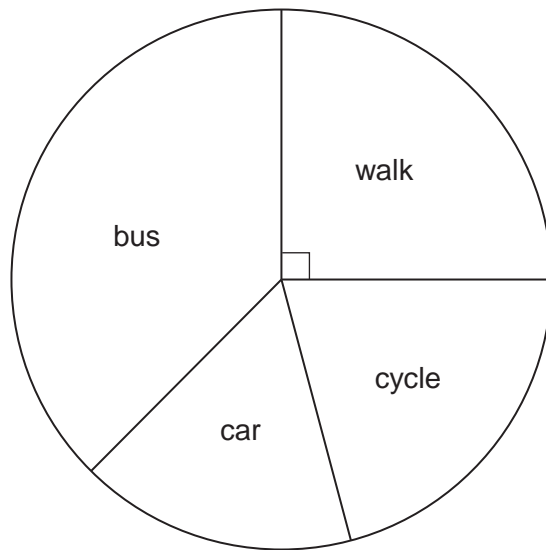
Change 2

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(2 marks)

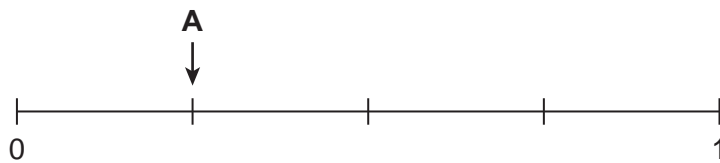


4 The pie chart shows information about how year 9 students travel to a school.



4 (a) A student from year 9 is chosen at random.
Mark, with the letter, the probabilities of each of the following on the scale below.
The first one has been done for you.

- A: The student walks to school.
- B: The student does **not** walk to school.
- C: The student travels to school by train.



(2 marks)

4 (b) 40 students travel to school by car.
How many year 9 students are there?

.....

.....

.....

Answer (3 marks)



4 (c)

There are 252 students in year 10.

The same proportion of students walk to school as in year 9.

Work out the number of year 10 students that walk to school.

.....

.....

.....

Answer (2 marks)



5 The table shows the types of shell that Chris collects.

Type of shell	Number
Mussel	18
Winkle	10
Whelk	8
Razor	4

5 (a) Draw and label a pie chart to represent the data.

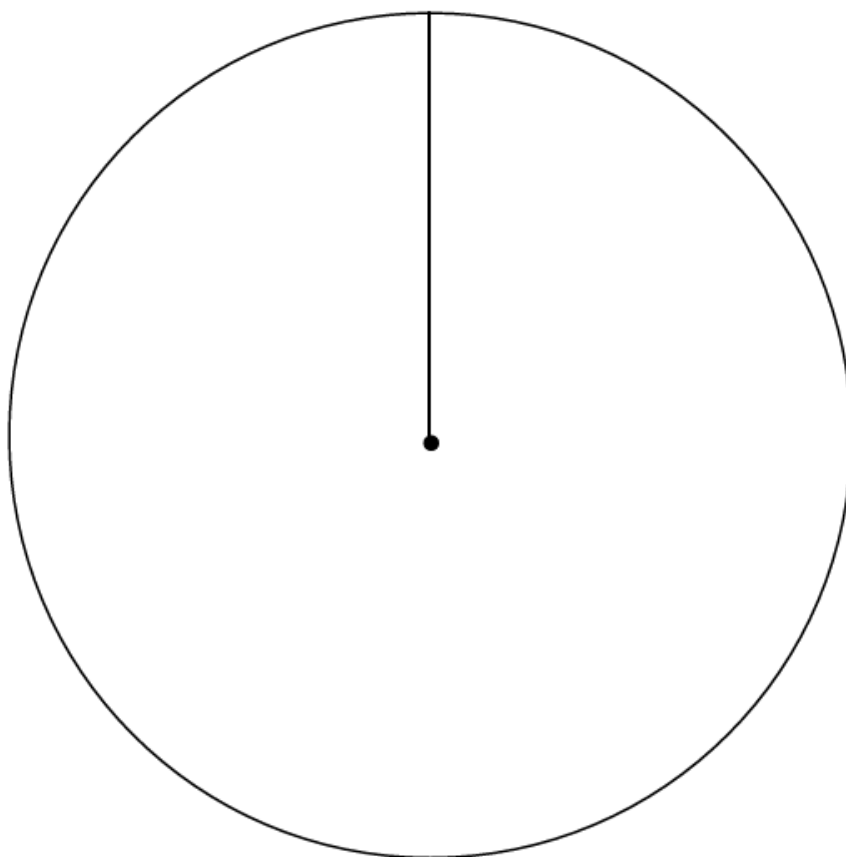
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Chris's shells



(4 marks)



5 (b) Sophie collects the same proportion of winkle shells as Chris.

She collects 15 winkle shells.

Work out the number of shells that Sophie collects.

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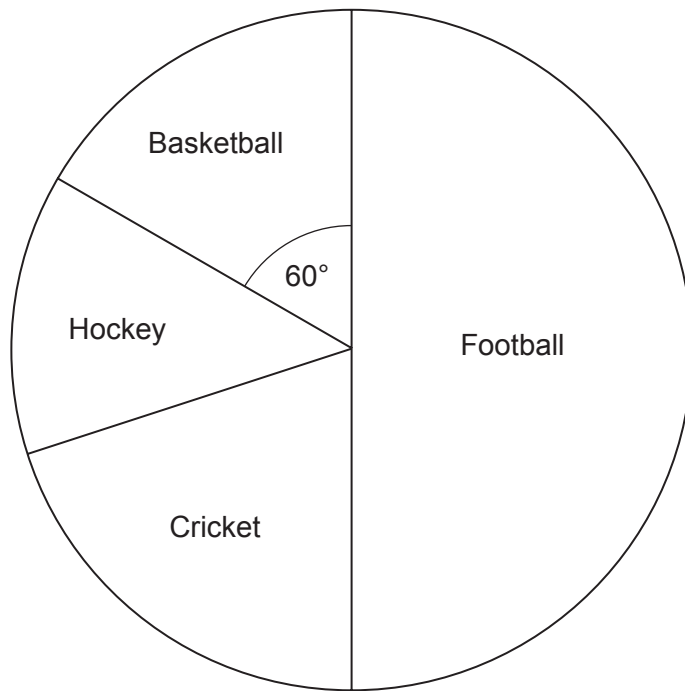
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Answer

(3 marks)



6 The pie chart shows the sports played by 60 students during their games lesson.



6 (a) How many students play football?

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Answer (1 mark)

6 (b) How many students play hockey or cricket?

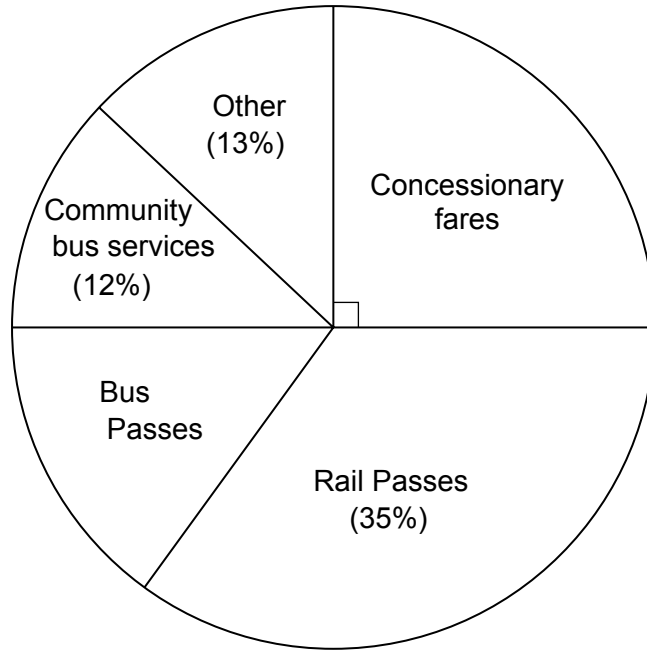
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Answer (3 marks)



7 The pie chart shows how a council spends money on transport. Only some of the percentages are given.



7 (a) 25% of the money is spent on Concessionary fares.

Explain how the pie chart shows this.

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(1 mark)

7 (b) What percentage of the money is spent on Bus Passes?

.....

Answer % (2 marks)

7 (c) The council spends £200 million on transport in total.

Work out 12% of £200 million to find how much the council spends on Community bus services.

.....

Answer £ million (2 marks)



8 Misba asks 18 pupils to choose their favourite vegetable from a list. These are her results.

peas broccoli peas **carrots** carrots broccoli
 peas broccoli sprouts carrots **peas** carrots
 carrots peas carrots **carrots** carrots broccoli

Misba decides to draw a pie chart to show these results. The table shows some of her work.

Favourite vegetable	Tally	Frequency	Angle on pie chart
Broccoli (B)		3	60°
Peas (P)			
Carrots (C)			
Sprouts (S)			
		Total = 18	Total = 360°

8 (a) Complete the tally and frequency columns in the table.

(2 marks)

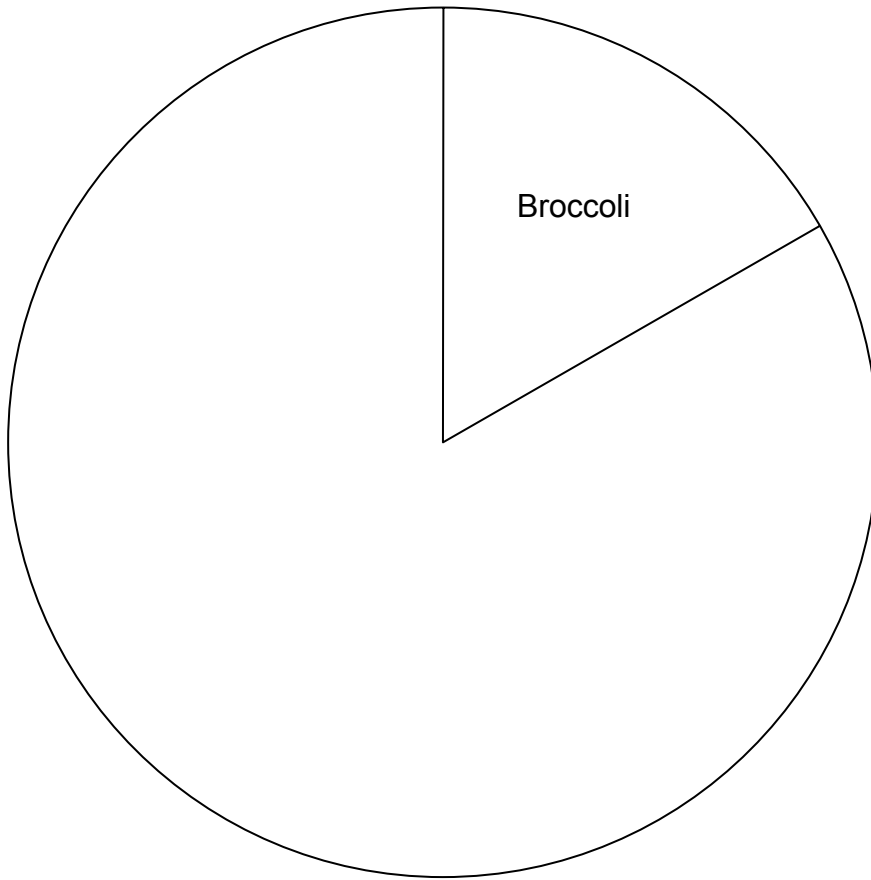
8 (b) (i) Complete the angle on the pie chart column in the table.

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(2 marks)



8 (b) (ii) Complete the pie chart to represent this information.



(2 marks)



There are no questions printed on this page

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**

