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Other Names	
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GCSE 9 - 1 Questions

Pie Charts 2

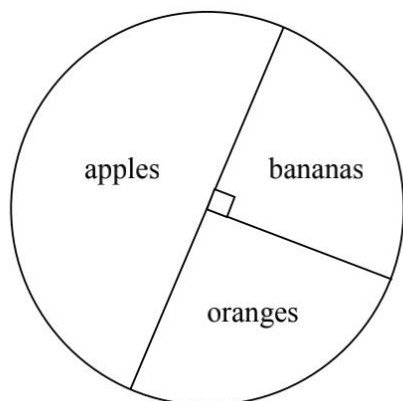
Calculator Allowed

INSTRUCTIONS TO CANDIDATES

- Write your name in the space provided.
- Write your answers in the spaces provided in this question paper.
- Answer ALL questions.
- Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.
- You should have a ruler, compass and protractor where required.

Total Marks :

1)



The pie chart shows 3 types of fruit eaten at breakfast.

(a) What is the angle that represents the oranges eaten?

Ans: _____ °

(b) 10 oranges are eaten at breakfast.
What is the **total** number of fruit eaten?

Ans: _____ fruit

(4 marks)

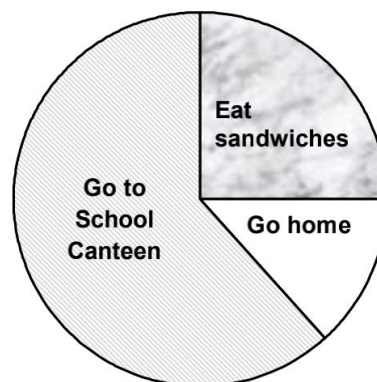
2) This pie chart shows how the students of a class have lunch during mid-day break.

a) Write down the largest slice of the pie chart.

Ans _____

b) Write down the fraction of the class that has sandwiches.

Ans _____

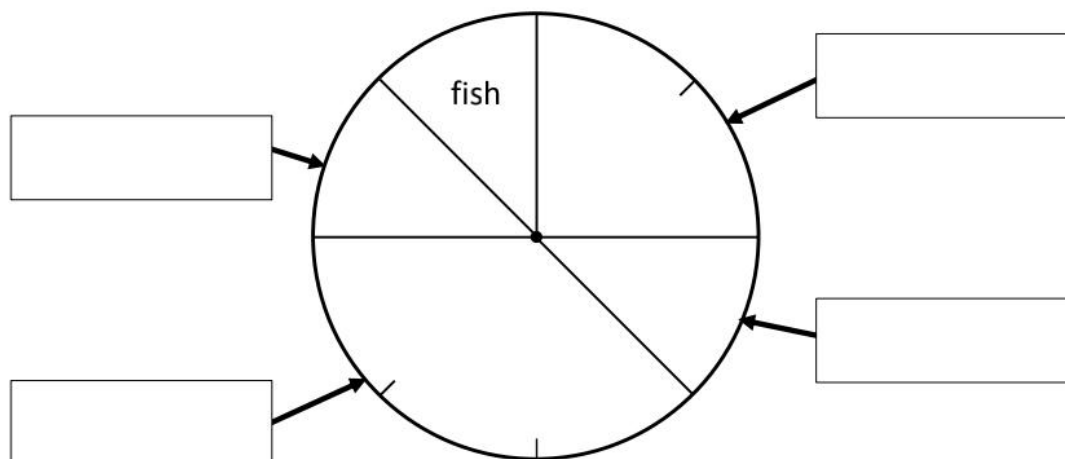


c) Eight pupils in the class have sandwiches. Write down the number of pupils in the class.

Ans _____

(4 marks)

3)



- (a) Use the information below to fill in the labels on the pie chart.

burgers

chicken

pizza

pasta

- Most of the children like **burgers**.
- $\frac{1}{4}$ of the children like **chicken**.
- There is an equal number of children who like **pizza** and **pasta**.

- (b) What fraction of the children like **fish**?

Ans: _____

- (c) 168 children took part in this survey.
How many children prefer **chicken**?

Ans: _____

- (d) A student is chosen at random. Work out the probability that the student

- (i) likes burgers

Ans: _____

- (ii) does not like burgers

Ans: _____

(8 marks)

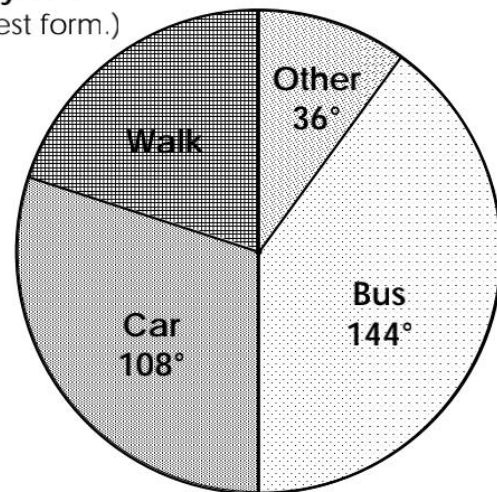
4) The pie-chart shows how a group of 400 students travel to school each day.

(a) Complete:

Type of Travel	Bus	Car	Walk	Other
Angle	144°	108°		36°

(b) How many of the students go to school **by bus**?
(Give the answer as a **fraction** in its simplest form.)

$$\text{By Bus} = \frac{\boxed{}}{\boxed{}}$$

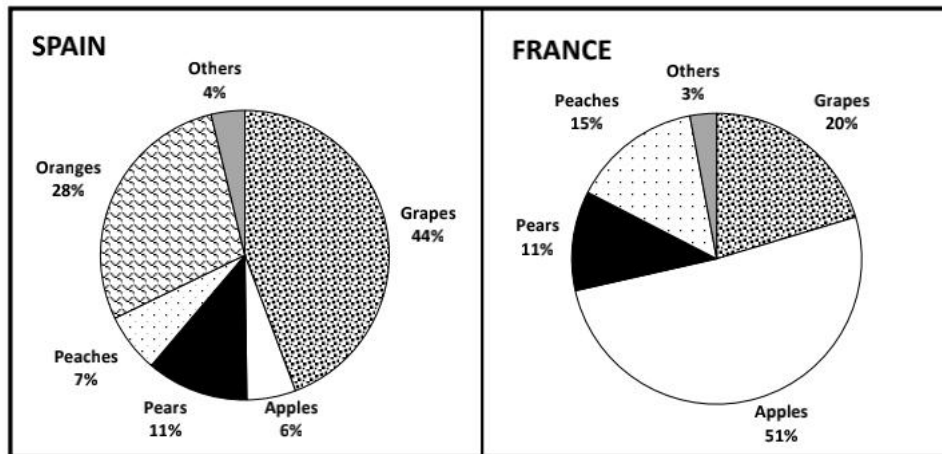


(c) How many students go to school **by car**?

$$\text{By Car} =$$

(8 marks)

- 5) The pie charts below show the fruit produced a few years ago by France and Spain.



Use the pie charts to answer the following questions

- a) The largest produce in Spain was

[1]

- b) The largest produce in France was

[1]

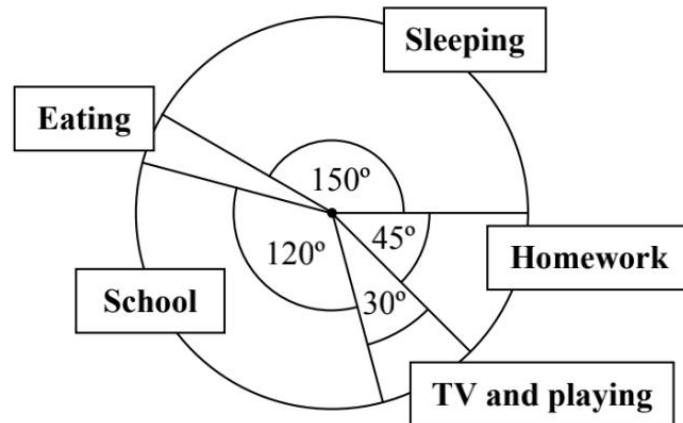
Spain produced a total of 10909 tonnes of fruit in that year. France produced 15615 tonnes of fruit that year.

- c) How many tonnes of pears did they produce altogether? Give your answer to the nearest tonne.

Answertonnes

[3]

6) The **pie chart** below represents Daphne's daily activities.



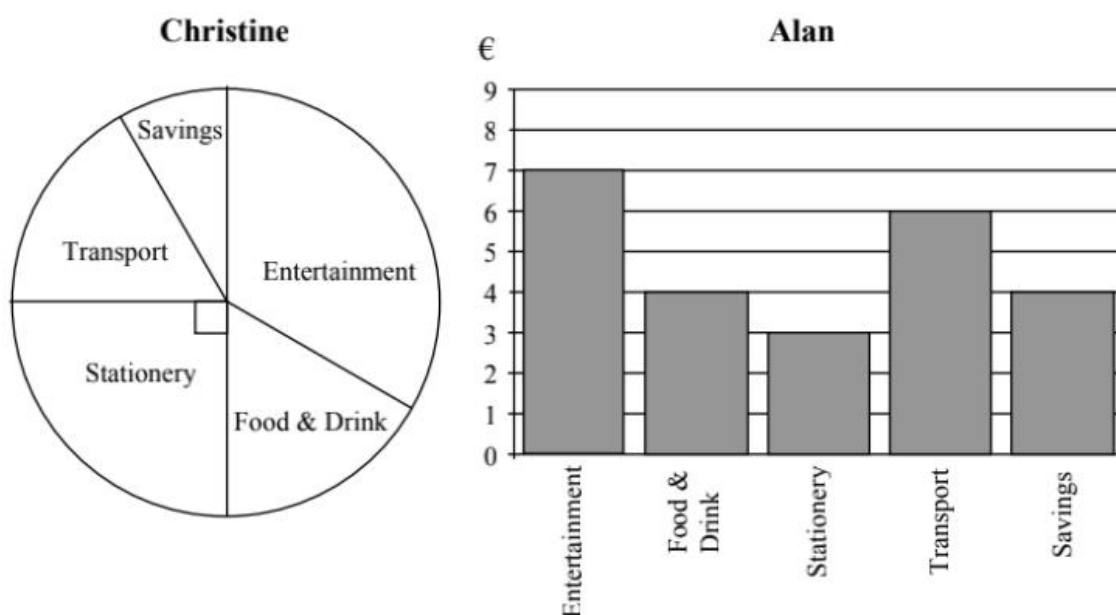
(a) How many hours does Daphne spend **sleeping**?

(b) How many hours does she spend **eating**?

(c) How many hours does she spend at **school** and doing her **homework**?

(6 marks)

- 7) Christine and Alan **each** receive a weekly allowance of €24.
 The pie chart shows how Christine spends her allowance.
 The bar chart shows how Alan spends his allowance.



- (i) How much does Christine spend on stationery? _____
- (ii) On which item does Alan spend €6? _____
- (iii) Who saves more money, Alan or Christine? Explain your answer.

- (iv) On which item do Alan and Christine spend the **same** amount of money?
 State how much they spend.

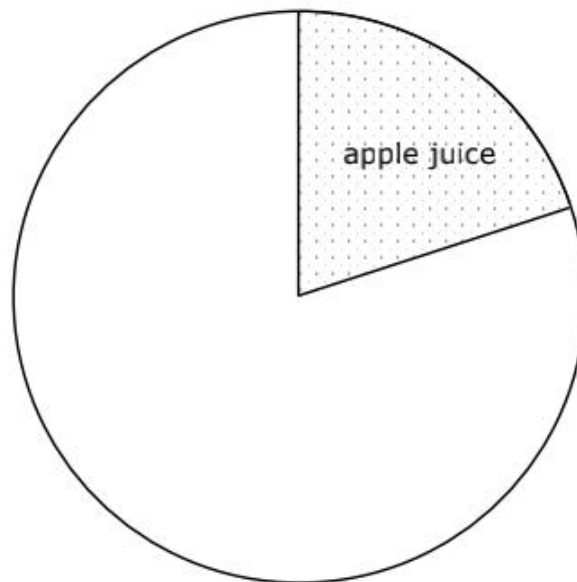
(6 marks)

- 8) Thirty children at a party were asked what type of drink they prefer. The table below shows their preferences:

(a) Complete the table below:

Drink	Frequency	Angle in Pie Chart
water	5	60°
lemonade	10	
apple juice	6	72°
orange squash	9	

(b) Complete the following pie chart.



(c) What is the probability that a child chosen at random:

(i) drinks water?

Ans: _____

(ii) does not drink lemonade?

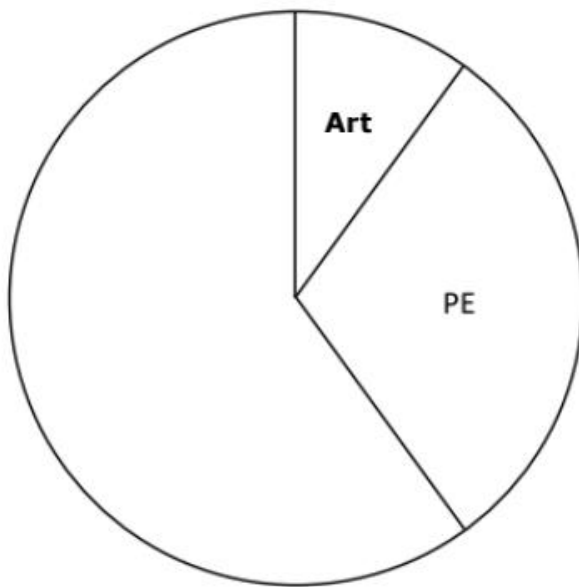
Ans: _____

(9 marks)

9) The table gives some information about the favourite subject of 90 students.

Subject	Frequency	Angle
Maths	18	
Science	36	
Art		36°
PE		108°
Total	90	360°

(a) Complete the table.



(b) Use the information in the table to complete the pie-chart.

(c) Work out the percentage of the students whose preferred subject is **Art**.

Ans: _____

(d) Work out the fraction of the students whose preferred subject is either Maths or Science. Simplify your answer.

Ans: _____

(11 marks)

10) 900 students in a school chose one foreign language.

$\frac{2}{5}$ chose Italian, one quarter chose French, 28% chose German and the rest chose Spanish.

(a) How many chose Italian?

Ans: _____

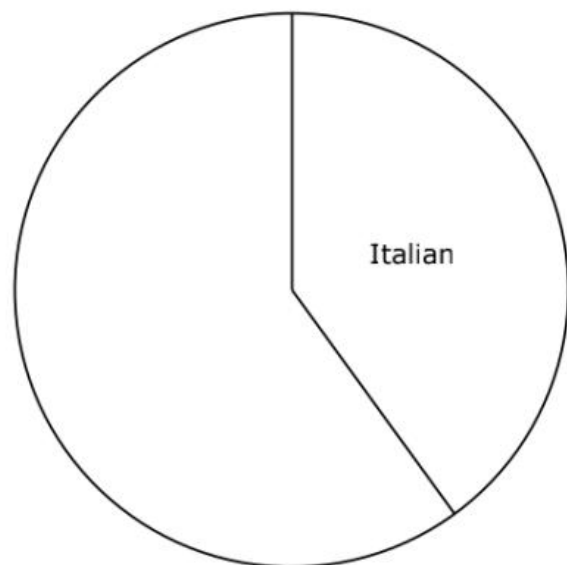
(b) How many chose German?

Ans: _____

(c) How many chose Spanish?

Ans: _____

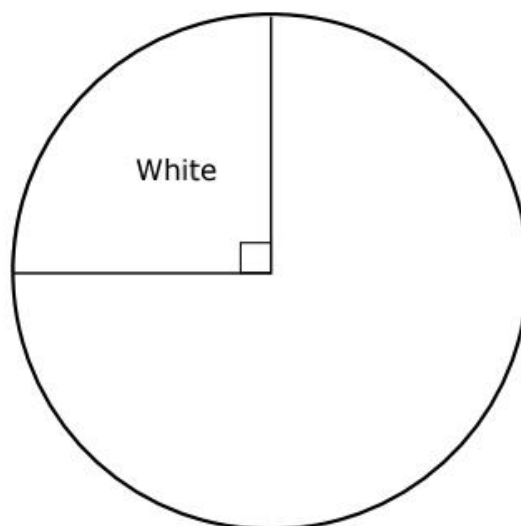
(d) Complete the pie chart showing the distribution of the four language choices.



(9 marks)

- 11) The table and pie chart show information on colours of cars in a car park. Complete the table and pie chart.

Colour	Frequency	Angle
Silver	12	180°
Black		45°
Grey	2	
White		
Blue	1	15°
Total	24	360°



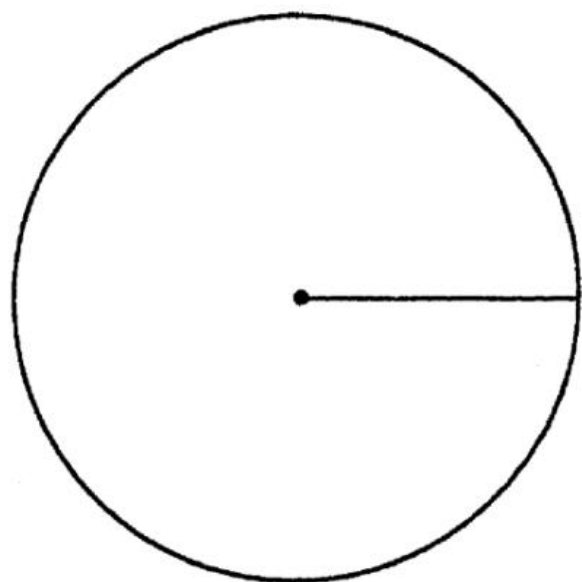
(8 marks)

- 12) The table shows TV programmes preferred by a group of students.

TV Programme	QUIZ	SPORT	CARTOONS	NEWS
Frequency	5	10	12	3

- a) How many students were in the group ?[1]
 b) Which type of programme was the most popular?[1]
 c) Complete and label the pie chart to show the above information. [5]

TV Programme	Frequency	Angle
Quiz	5	
Sport	10	
Cartoons	12	
News	3	
Total		360°



[6]

- 13) The children in a class were asked how many pets they have at home. This information is shown in the table below.

Number of pets	0	1	2	3	4
Number of children	4	6	5	7	2

- a) What is the total number of children in this class?

Ans: _____

- b) What is the modal number of pets?

Ans: _____

- c) What is the range of the number of pets?

Ans: _____

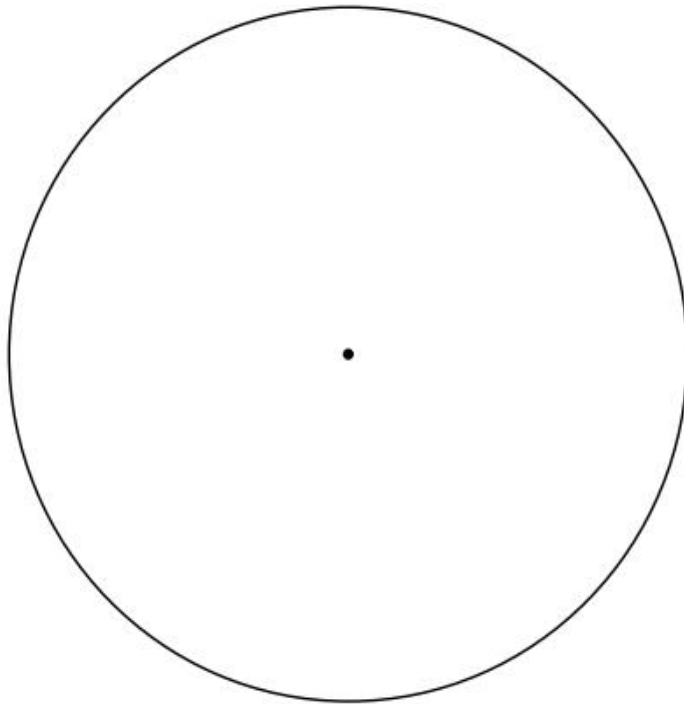
- d) How many children have more than 2 pets?

Ans: _____

- e) How many pets are there in all?

Ans: _____

- f) Illustrate the information in the table in the pie chart below. Fill in and label the diagram completely.



(10 marks)

14) A firm making furniture sold its products in the following countries.

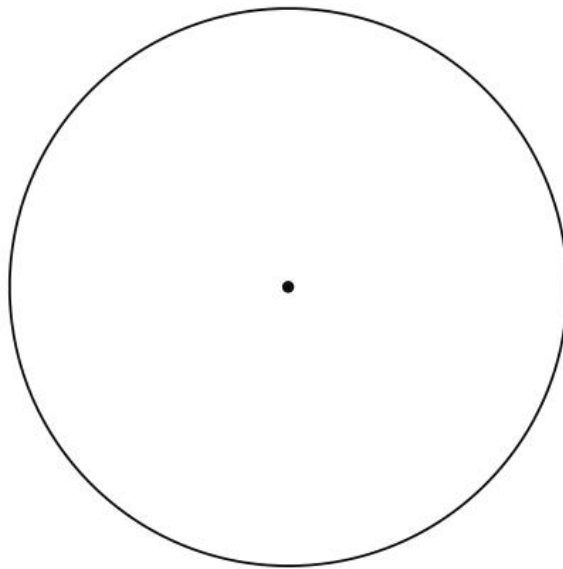
France	5%
Italy	10%
Greece	15%
Spain	40%
Other Countries	x %

- (a) What **percentage** of the firm's products was sold in other countries?

_____ %

- (b) Complete the table below and use it to **draw** and **label** a **pie chart** representing this information.

Country	France	Italy	Greece	Spain	Other
Angle	18				

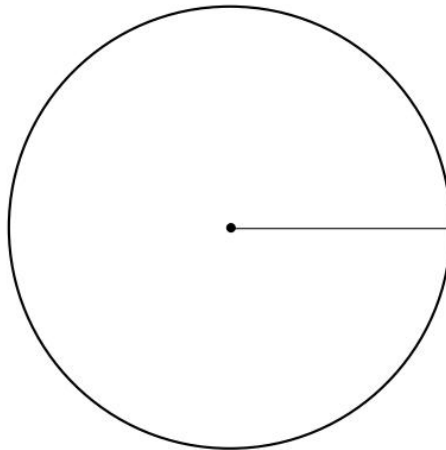


8 marks

- 15) The frequency table below shows the time, in minutes, taken by a number of pupils to go from home to school on a particular morning.

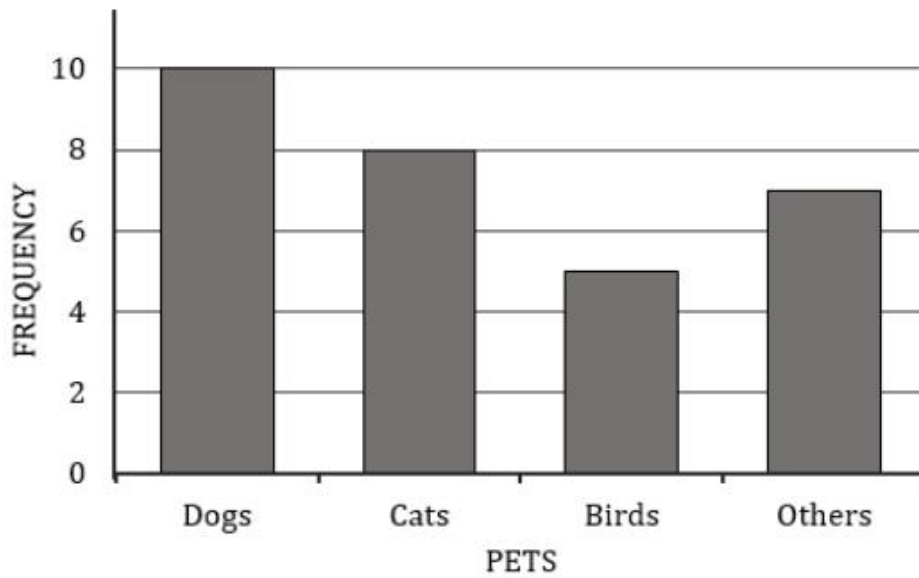
Time, t , in minutes	Frequency	Angle in Pie Chart
$0 \leq t < 10$	2	30°
$10 \leq t < 20$	9	
$20 \leq t < 30$	5	
$30 \leq t < 40$	4	60°
$40 \leq t < 50$	3	
$50 \leq t < 60$	1	
Total		360°

- (a) Complete the table above.
- (b) Draw the pie chart using the table above.



(8 marks)

16) The bar chart shows the different pets owned by a number of students.

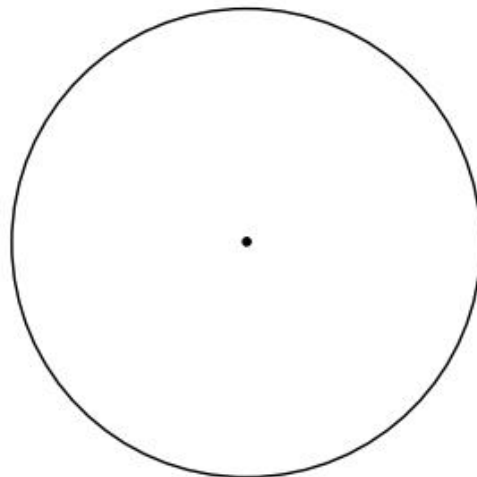


(a) How many students took part in the survey?

Ans: _____

(b) Work out the angle for each pet and draw the pie chart to illustrate the data.

Pets	Dog	Cat	Bird	Other
Frequency				
Angle				

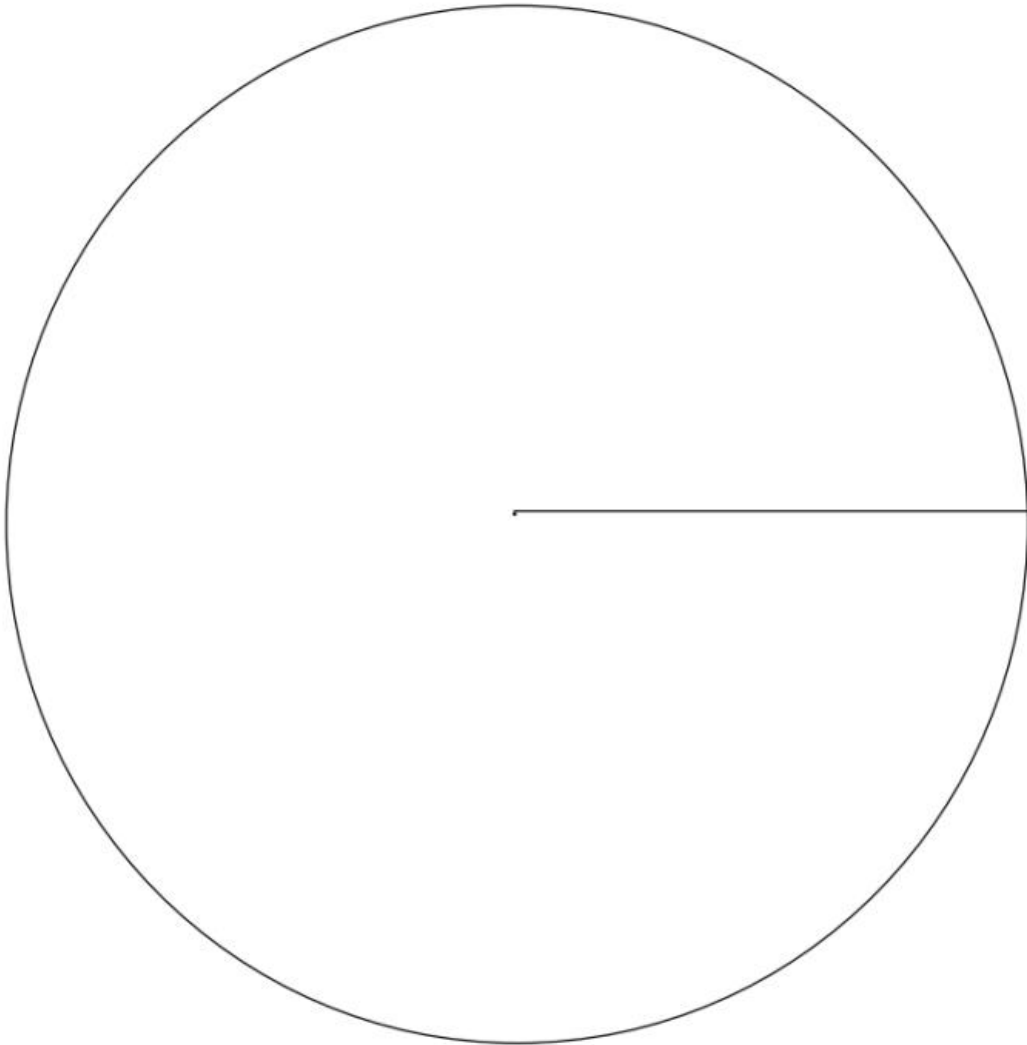


(8 marks)

- 17) A group of 90 children were asked which drink they preferred for breakfast.
The following table shows the results obtained:

Type of drink	Number of children	Angle on pie chart
Coffee	10	
Tea	12	48°
Drinking Chocolate	20	80°
Milkshake	18	
Juice		

- a) Fill in the missing spaces in the table.
b) Complete the pie chart to show all the information.

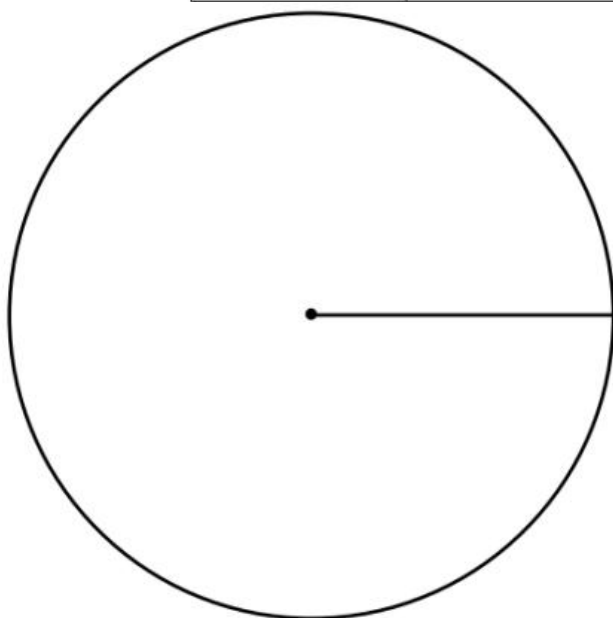


(8 marks)

18) The table shows the number of foreign students, by nationality, in a Dubai primary school during the academic year 2014/2015

- a) Use the circle below to draw a pie chart representing this information. Round your angles to the nearest degree.

Nationality	Number of pupils
UK	190
Bulgaria	100
Italy	97
Syria	82
Libya	64



- b) A foreign pupil is chosen at random. What is the probability that the pupil is Bulgarian?

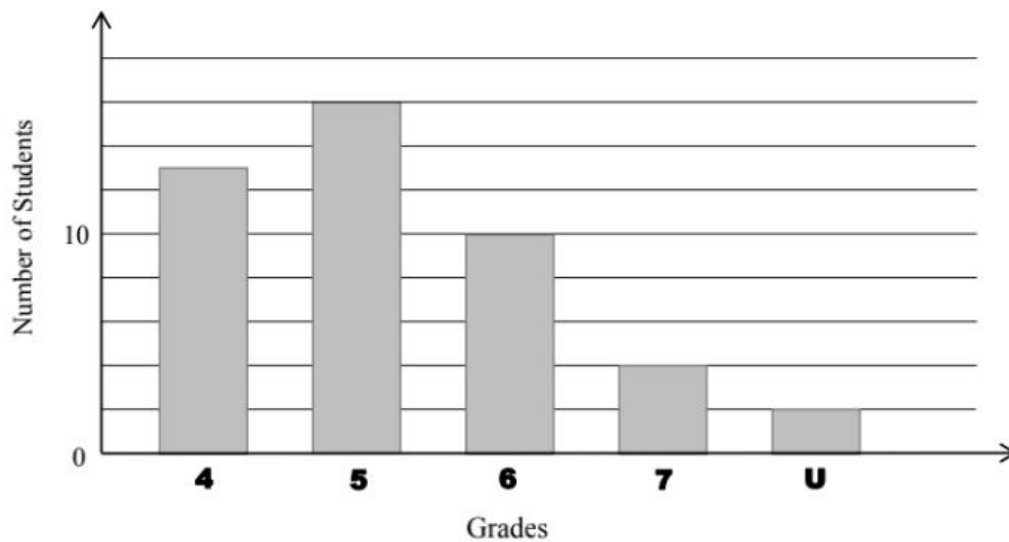
Ans: _____

- c) Complete: The number of pupils from _____ was almost three times the number of pupils from _____.

- d) In the scholastic year 2016/17, the number of pupils from Italy was 120. Julian says that the angle of the sector in the pie chart will be certainly larger. Is he right? Explain.

(9 marks)

- 19) In Mr Clarke's middle set mathematics class, at Mask's Secondary school, the Year 11 students obtained the following results.



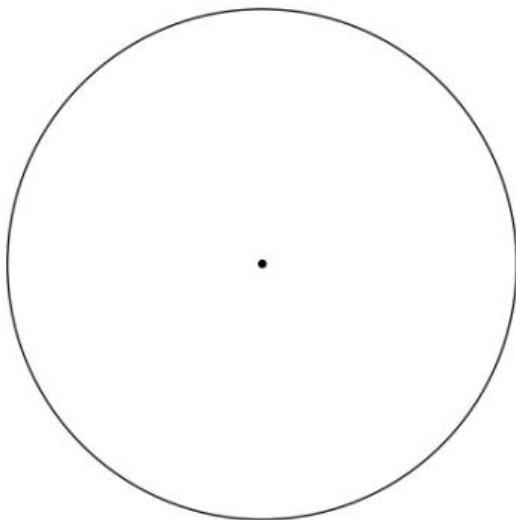
- a) How many students are in Mr Clarke's class?

Ans: _____ students

- (b) Which grade is the **mode**?

Ans: Grade _____

- (c) Represent the data above on a **pie chart**. Show all the necessary working.



(8 marks)