

6.3

Pie Charts

Mr Faruk

Teacher of Mathematics
BSc/MSc/PGCE Mathematics

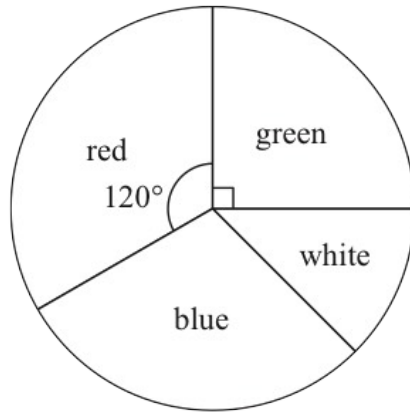
✉ cieigcsolutions@gmail.com



16 Janine has a bag of buttons.

The buttons are green or red or white or blue.

The pie chart gives information about the number of buttons of each colour in Janine's bag.



There are 60 green buttons in the bag.

(a) Work out the total number of buttons in the bag.

.....
(1)

(b) Work out the number of red buttons in the bag.

.....
(1)

Janine also has a tin of counters.

The table gives information about the counters in Janine's tin.

Colour	Frequency
Black	40
Pink	30
Orange	55
Purple	75
Total	200

(c) Write down the fraction of the counters in Janine's tin that are black.

Give your fraction in its simplest form.

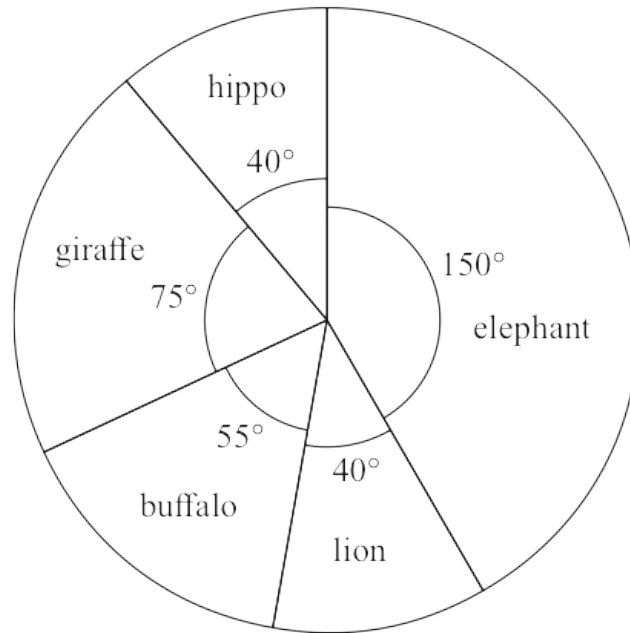
.....
(2)

A pie chart is drawn to show information about the number of counters of each colour in Janine's tin.

(d) Work out the size of the angle in the pie chart for the 30 pink counters.

.....
(2)

- 10 Jerry went on holiday to a game reserve.
He recorded the number of each of five different types of animal he saw.
The pie chart below gives information about his results.



- (a) Write down the ratio of the number of elephants Jerry saw to the number of giraffes he saw.
Give your ratio in its simplest form.

(2)

Jerry saw 8 lions.

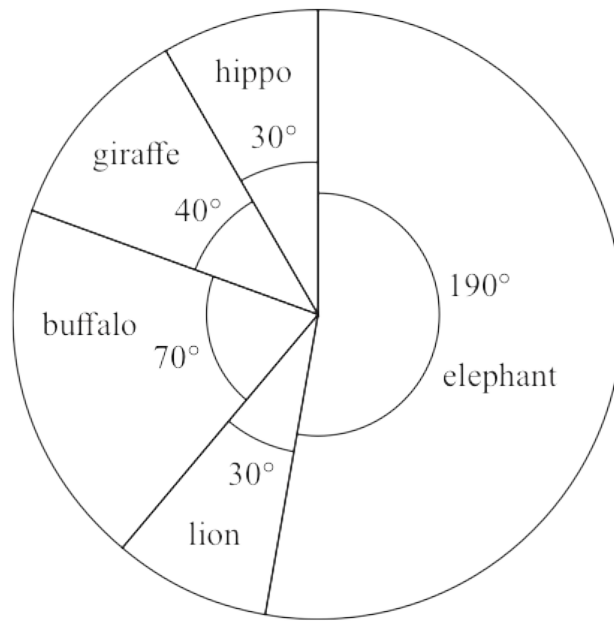
- (b) How many giraffes did Jerry see?

(2)

Lesley went on holiday to the same game reserve.

She also recorded the number of each of five different types of animal she saw.

The pie chart below gives information about her results.



Lesley says,

“The pie charts show that I saw more elephants than Jerry saw.”

(c) Is Lesley correct?

You must give a reason for your answer.

(1)

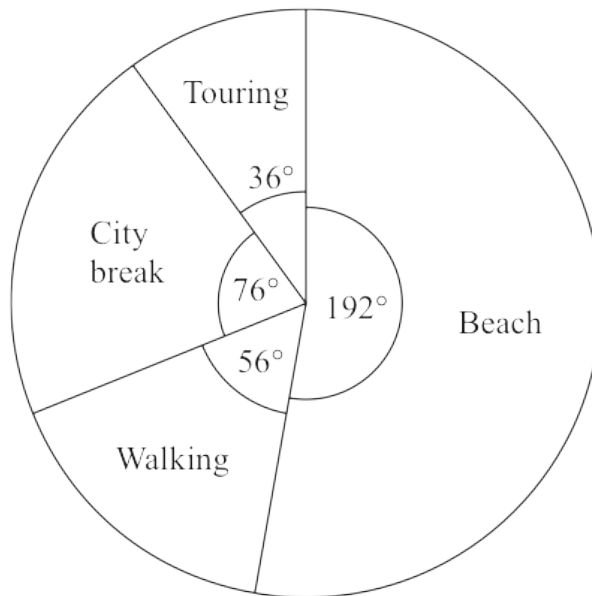
11 Kwo asked 40 people where they went on holiday last year. He is going to draw a pie chart for his results.

16 of the 40 people said they went to Egypt.

(a) Work out the size of the angle in the pie chart for Egypt.

.....
(2)

Tiffany asked some people what type of holiday they each like the best. She used her results to draw this pie chart.



48 of the people that Tiffany asked said they like beach holidays the best.

(b) Work out how many of the people Tiffany asked said they like walking holidays the best.

.....
(2)

- 10 Hugo records the number of pairs of trainers sold in each of four shoe shops last Saturday. He is going to draw a pie chart for his results.

The incomplete table shows two of Hugo's results and the sizes of three of the angles in his pie chart.

Name of shop	Number of pairs of trainers	Angle in pie chart
ABC Shoes	30°
Kilian Stuart Sports	18	45°
One Stop Shoes	48 $^\circ$
Superfast Trainers	165°

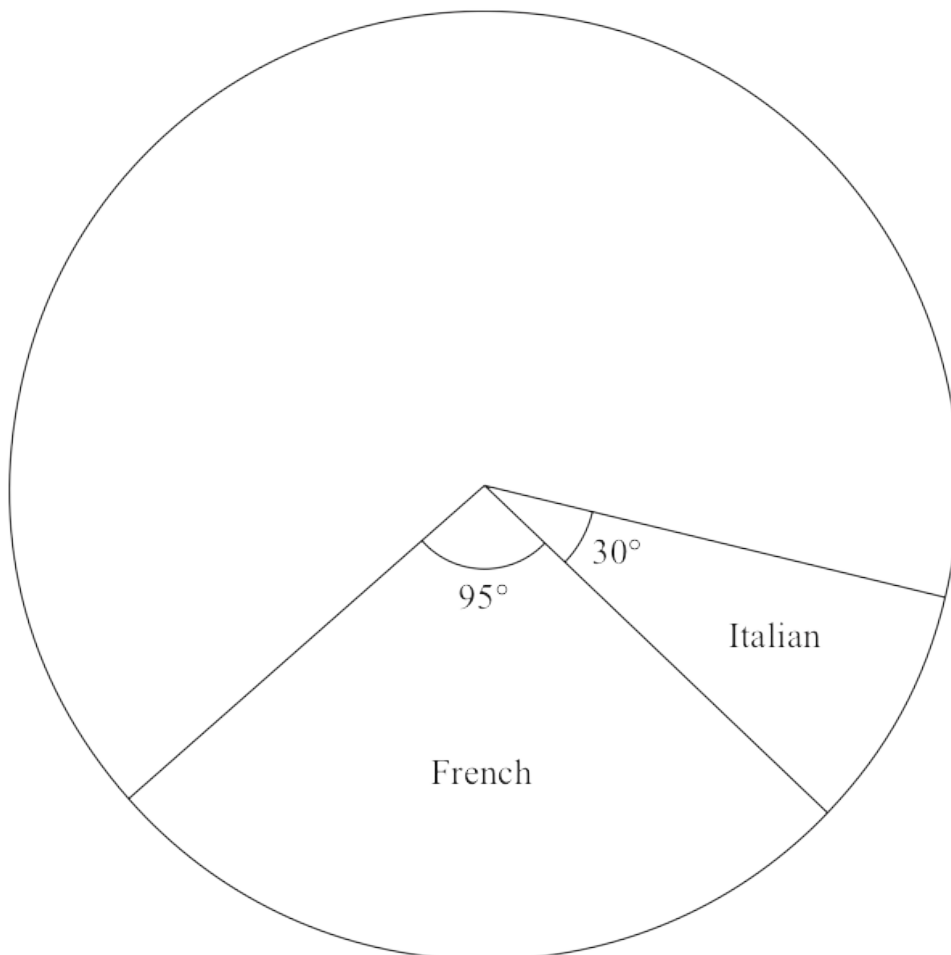
Complete the table.

(Total for Question 10 is 4 marks)

- 8 Some students leaving a language school one day were each asked which language lesson they had just attended.

The table and the pie chart give some information about their answers.

Language	Frequency	Angle in pie chart
Italian	24	30°
French		95°
Arabic	48	
English		
Spanish	80	



(a) Work out the number of students who answered French.

(2)

(b) Complete (i) the table and (ii) the pie chart.

(3)

14 Anjali, Ravina and Sandeep were the three candidates in an election.

Heidi draws a pie chart for the number of votes received by each of the three candidates.

The angle in the pie chart for the number of votes received by Anjali is 90°

The angle in the pie chart for the number of votes received by Ravina is 160°

Ravina received 400 votes.

Work out the number of votes Sandeep received.

.....

(Total for Question 14 is 3 marks)

- 13 Salma asked some people what type of exercise they each liked the best from walking or running or swimming or cycling.

Salma is going to draw a pie chart for her results.

The incomplete table gives some information about her results.

Type of exercise	Number of people	Angle in pie chart
Walking	18	90°
Running		150°
Swimming		
Cycling	15	

18 people answered walking.

- (a) How many people answered running?

.....
(2)

15 people answered cycling.

- (b) How many people answered swimming?

.....
(3)

- 11 Trisha asked 90 people to name their favourite type of cheese to put on a pizza. She is going to draw a pie chart for her results.

55 of the 90 people said that mozzarella was their favourite.

- (a) Work out the size of the angle on the pie chart for the sector representing mozzarella.

.....
(2)

Haashir asked a different group of people to name their favourite ice cream flavour. He used his results to draw this pie chart.



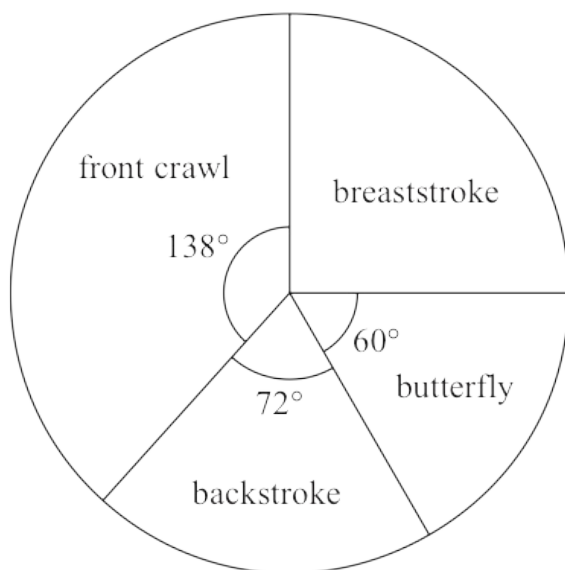
39 of the people Haashir asked said that vanilla was their favourite.

- (b) Work out how many of the people Haashir asked said that chocolate was their favourite.

.....
(2)

15 Sayeeda asked the members of a swimming club which one of front crawl, breaststroke, backstroke or butterfly is their favourite stroke.

The pie chart shows some information about their answers.



12 members said backstroke.

(a) Work out the number of members who said front crawl.

.....
(2)