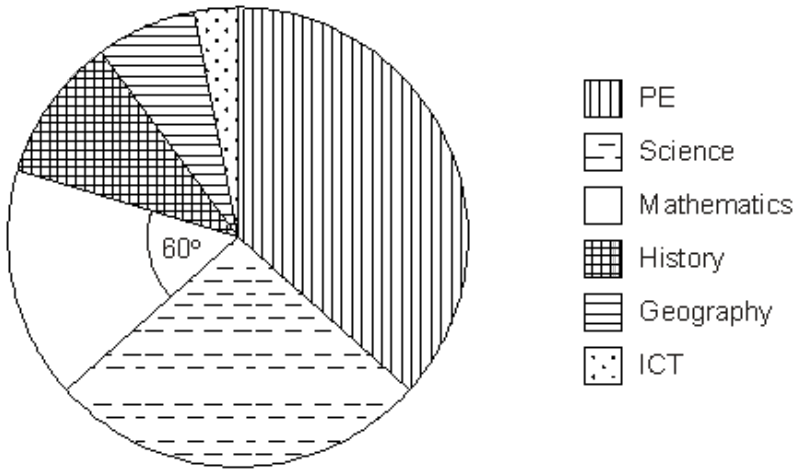


**Q1.** The pie chart shows the favourite lesson of 30 students.

**Favourite lesson**



How many of the students choose Mathematics as their favourite lesson?

.....  
 .....

Answer .....

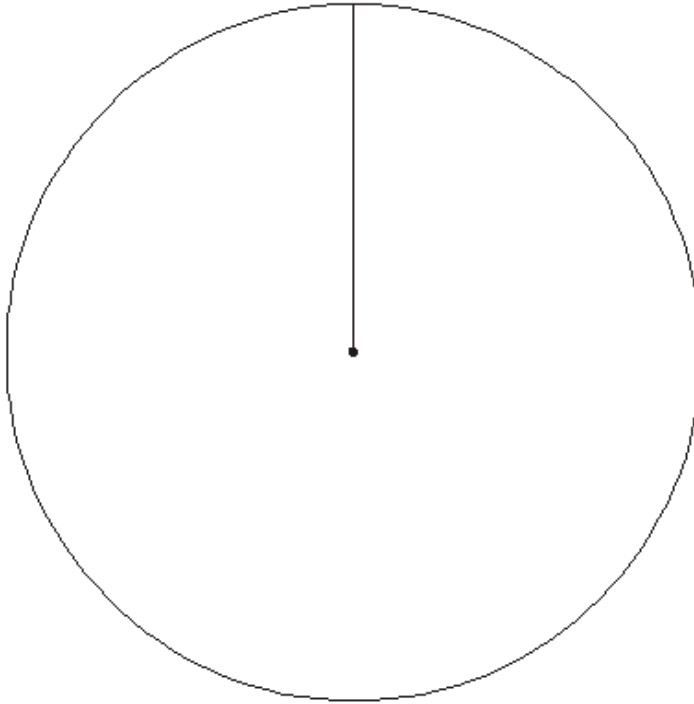
**(Total 2 marks)**

**Q2.** The table shows the races that 60 primary school pupils entered on their Sports Day. They each entered one race.

| Race entered  | Number of pupils |
|---------------|------------------|
| Egg and spoon | 18               |
| 3-legged      | 20               |
| Sack          | 12               |
| Obstacle      | 10               |

(a) Draw and label a pie chart to represent the information in the table.

.....  
.....  
.....  
.....



(4)

(b) Work out the percentage of pupils who entered the egg and spoon race.

.....  
.....

Answer .....%

(2)

(c) The pupils in the obstacle race took these times in seconds.

23 36 18 29 44 39 36 54 43 41

Draw an ordered stem and leaf diagram to show this information.

.....

.....

.....

.....

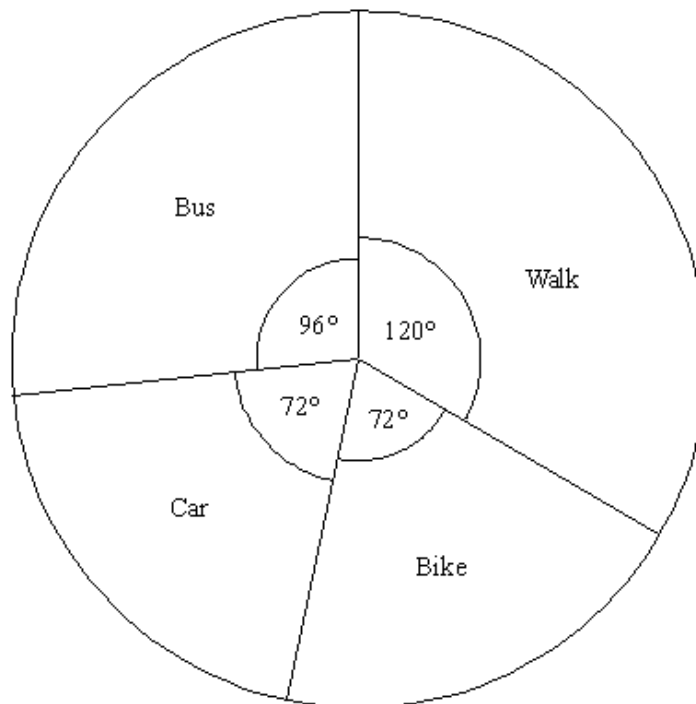
.....

Key: | 2 | 3 represents 23 seconds

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

(3)  
(Total 9 marks)

**Q3.** (a) The pie chart shows the ways that 30 pupils travel to school.



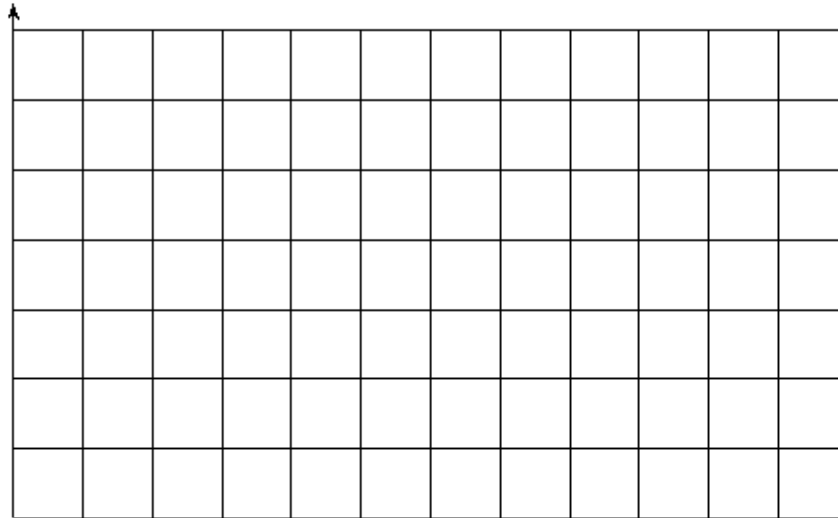
On the grid below, draw and label a bar chart to represent the same information.

.....

.....

.....

.....



(4)

(b) The pupils who walked to school took these times in minutes.

5 12 7 14 23 11 18 10 8 11

Draw an ordered stem and leaf diagram to show this information.

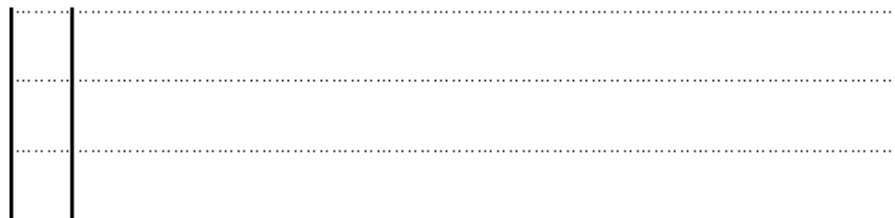
.....

.....

.....

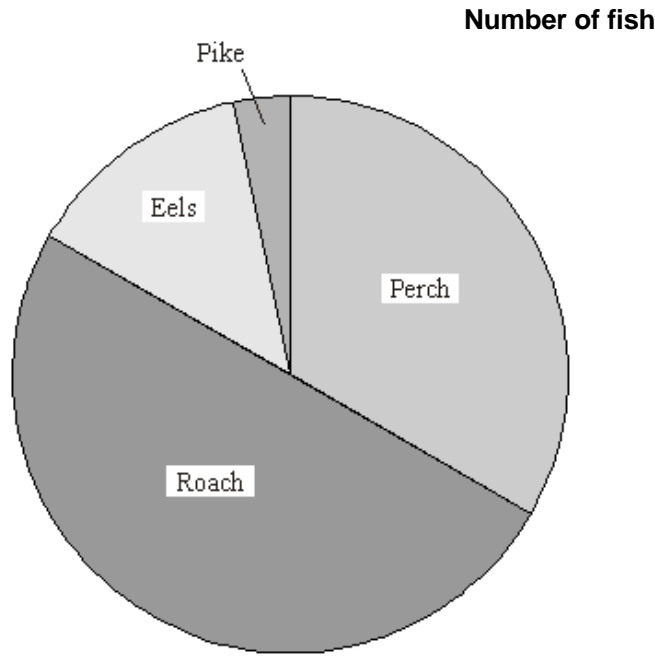
.....

Key: | 1 | 2 represents 12 minutes



(3)  
(Total 7 marks)

**Q4.** The pie chart shows the number of each type of fish that Frank caught in one day.



(a) Tick **one** box for each statement below.

|  | True                     | False                    | Cannot say               |
|--|--------------------------|--------------------------|--------------------------|
| (i) Half the fish caught were roach.               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (ii) There were more eels caught than pike.        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (iii) The pike weighed more than all of the roach. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

(3)

(b) Frank caught 30 fish altogether.  
One-third of the fish caught were perch.

How many eels and pike were caught altogether?

.....

.....

.....

Answer .....

(3)  
(Total 6 marks)

**Q5.** The number of complaints made about different parts of the Health Service last year is shown in the table.

| Type      | Number of complaints |
|-----------|----------------------|
| Hospitals | 400                  |
| Doctors   | 200                  |
| Dentists  | 80                   |
| Other     | 120                  |

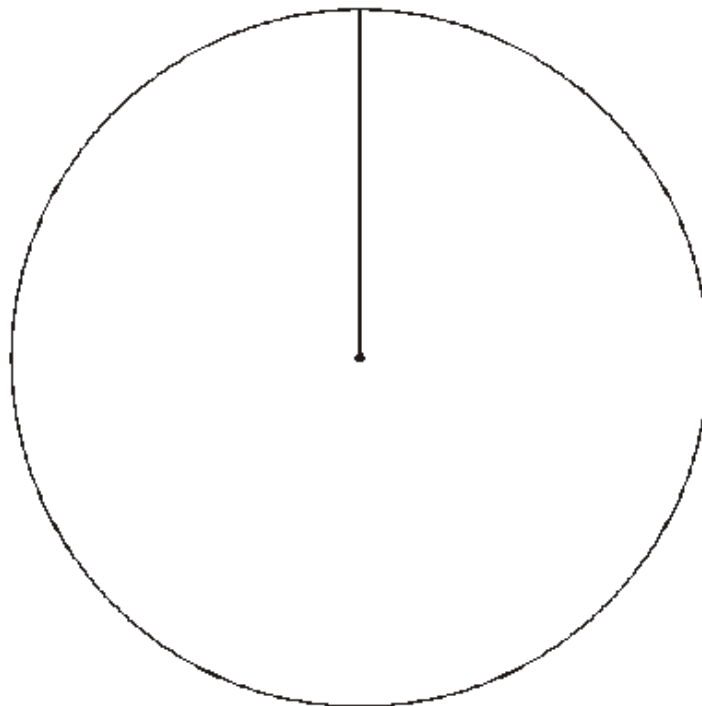
Draw and label a pie chart to represent these data.

.....

.....

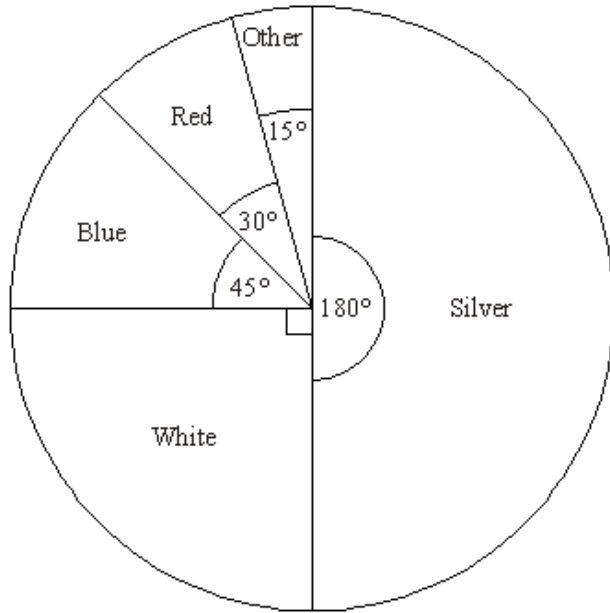
.....

.....



**(Total 4 marks)**

- Q6.** (a) 120 men were asked what colour car they own.  
The pie chart shows the results.



Work out the number of men who own a blue car.

.....

.....

.....

.....

Answer .....

(3)

- (b) 120 women were also asked what colour car they own.  
The results are shown in the table.

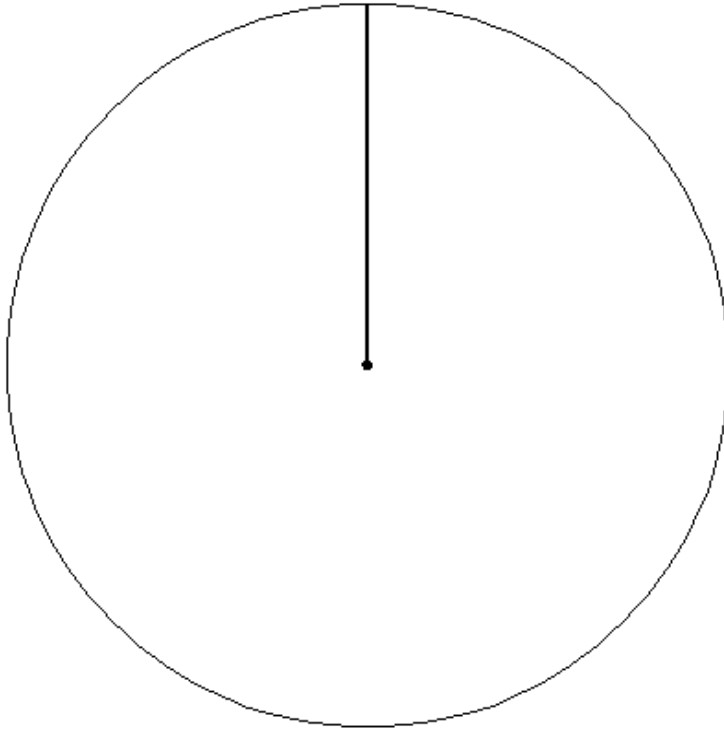
| Colour | Number of women |
|--------|-----------------|
| White  | 42              |
| Blue   | 35              |
| Silver | 25              |
| Red    | 10              |
| Other  | 8               |

Draw and label a pie chart to show this information.

.....

.....

.....



(4)  
(Total 7 marks)



**M1.**  $\frac{60}{360} \times 30$

oe  $\frac{30}{6}$

5

**M1**

**A1**

**[2]**

**M2.** (a) Fully correct pie chart, correctly labelled with all sector angles correct (108°, 120°, 72° and 60°) (sectors ± 2°)

*B3 4 correct sectors drawn with no/wrong labels  
or  
2 correct sectors drawn and 4 labels  
in correct order of size*

*B2 2 correct sectors drawn; with no/wrong labels  
or  
1 correct sector drawn and 4 labels  
in correct order of size*

*or  
4 correct angles calculated*

*B1 1 correct sector drawn; no/ wrong labels  
or  
1 correct angle calculated*

*or  
4 sectors labelled in correct order of size*

**B4**

(b)  $18 \div 60 \times 100$

oe eg  $\frac{3}{10} \times 100$  or  $\frac{108}{360} \times 100$

30

**M1**

**A1**

(c) Stem (1, 2, 3, 4, 5)

**B1**

Leaf (8) (3,9) (6,6,9) (1,3,4) (4)

*B1 for 3 or 4 rows correct  
B1 not ordered*

**B2**

**[9]**

**M3.** (a) Fully correct bar chart

**Frequencies**

Walk (10), Bus (8), Car (6) and  
Bike (6)

**Format**

Horizontal or vertical  
Labelled frequency axis  
Scale on frequency axis  
Equal width bars correctly labelled  
Condone no gaps between bars  
Condone lines

Bar chart attempted

*B3 All three frequencies correct, 1 or 2 format errors*

*B2 Three frequencies correct, 1 or 2 format errors or*

*Two frequencies correct, no format errors*

*B1 No frequencies correct, No format errors or One frequency correct, format errors*

Bar chart **not** attempted

*B2 All frequencies correctly calculated*

*B1 One correct frequency seen or  $360 \div 30$  oe or 12 seen*

*SC2 All frequencies in proportion, no format errors*

*SC1 All frequencies in proportion, format errors*

**B4**

(b) Correct diagram

*-1eeoo*

Stem (0, 1, 2)

Leaf (5, 7, 8; 0, 1, 1, 2, 4, 8; 3)

*eg leaf or leaves not ordered each value omitted in stem or leaf value in incorrect leaf*

**B3**

[7]

**M4.** (a) (i) True

**B1**

(ii) True

**B1**

(iii) Cannot say

**B1**

(b)  $\left(\frac{1}{3} \times 30\right)$  or  $\left(\frac{1}{2} \times 30\right)$  or 10 or 15  
oe

M1

$$30 - \left(\frac{1}{30} \times 30\right) - \left(\frac{1}{2} \times 30\right)$$

M1

5

*Accept 4 eels and 1 pike*

*Note:  $\frac{5}{30} \Rightarrow M2A0$*

A1

[6]

**M5.** Any correct method

eg  $\frac{400}{"800"} \times 360^\circ$

*Any one correct angle seen or implied 180°, 90°, 36° or 54°  
Not 4 quarters but must be 4 sectors*

M1

All 4 angles correct

*180°, 90°, 36° and 54° seen or implied*

A1

4 sectors drawn accurately and correct

$\pm 2^\circ$

B1

Correct labelling, in correct proportions

Exactly 4 sectors

*Hospitals in largest sector...  
Dentists in smallest sector etc  
Not D & D alone*

B1

[4]

**M6.** (a)  $\frac{45}{360}$  or  $360 \div 45 (= 8)$   
 $180^\circ = 60 \text{ men}$

**M1**

$\frac{45}{360} \times 120$  or  $120 \div "8"$   
 $90^\circ = 30 \text{ men}$

**M1 dep**

15  
 $45^\circ = 15 \text{ men}$

**A1**

- (b) Any one correct method seen  
 or any one correct angle seen

$\frac{360}{120} \times 42$  or  $3 \times 42$   
*Can be one correct sector, labelled correctly*

**M1**

$126^\circ, 105^\circ, 75^\circ, 30^\circ, 24^\circ$   
*4 or 5 correct angles*

**A1**

All 5 angles drawn correctly  $\pm 2^\circ$   
*Must be only 5 sectors*

**A1**

All 5 sectors labelled in correct order of size  
*Must be only 5 sectors*

**B1**

[7]

