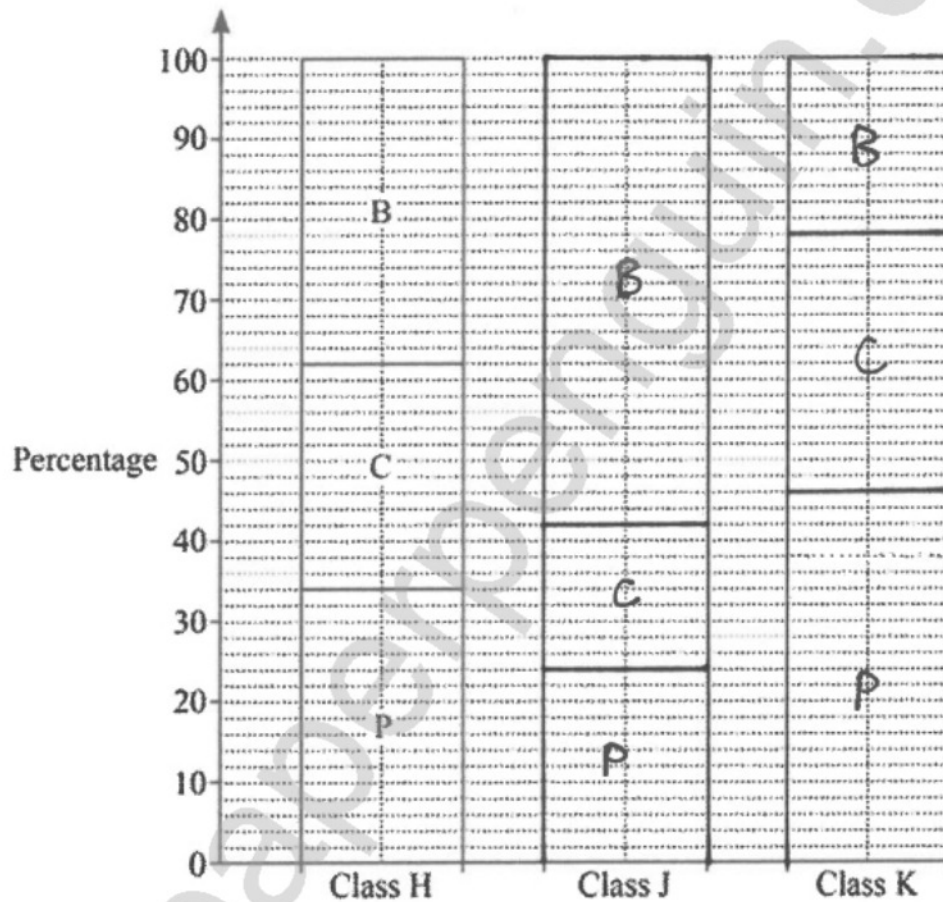


A Pie Charts and Bar Charts

- 4 The table shows the percentage of students in each of three classes who study physics, chemistry and biology.

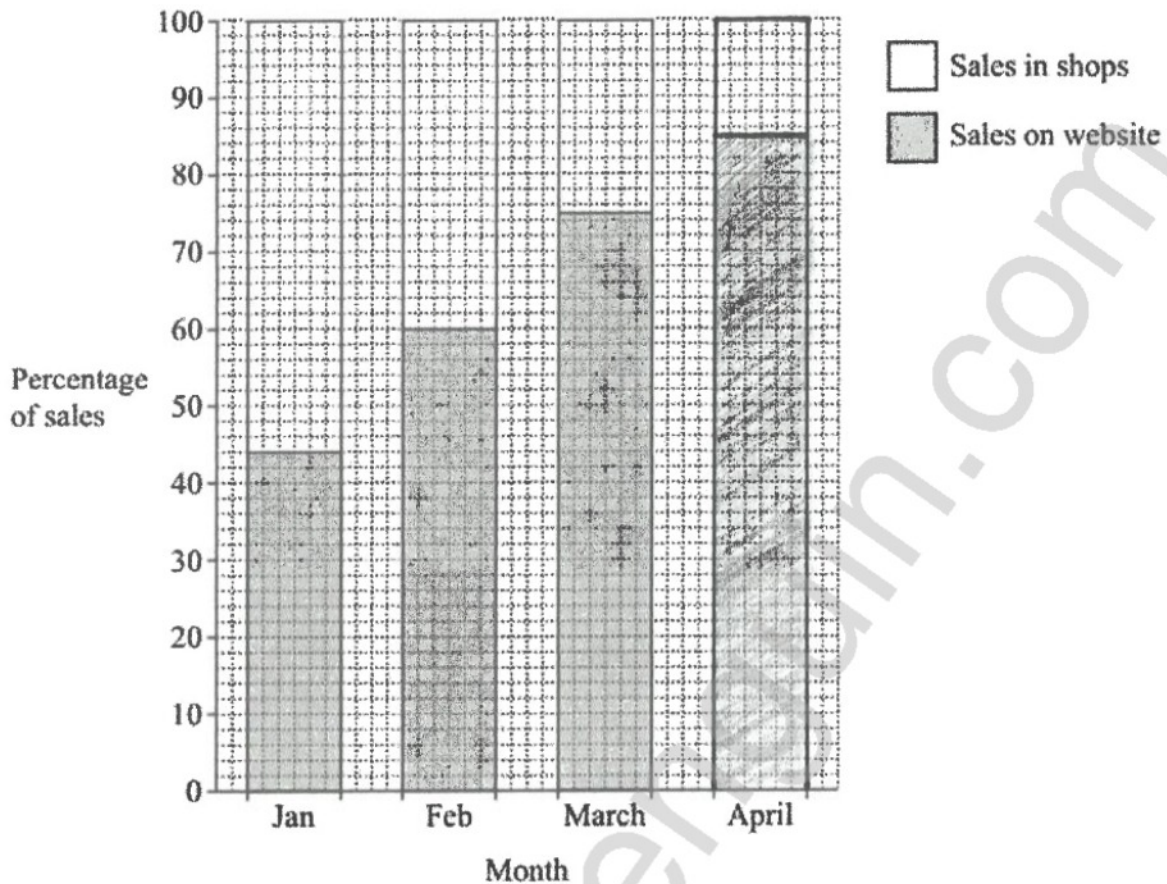
	Physics (P)	Chemistry (C)	Biology (B)
Class H	34	28	38
Class J	24	18	58
Class K	46	32	22

Complete the compound bar chart to show this information.



[3]

- 11 A company sells items either on a website or in shops.
The composite bar chart shows the percentage of sales on the website and in shops for January, February and March.



- (a) In April, $\frac{17}{20}$ of the company's sales were on the website.

On the grid, draw the bar for April.

[2]

$$\frac{17}{20} \xrightarrow{\times 5} \frac{85}{100} = 85\%$$

- (b) In February, the company had sales of \$3.5 million.

Work out the value of sales **in shops** in February.

Feb. shop sales: 40%

40% of 3.5m

$$= 3.5 \times 0.4$$

$$= \underline{1.4 \text{ million}}$$

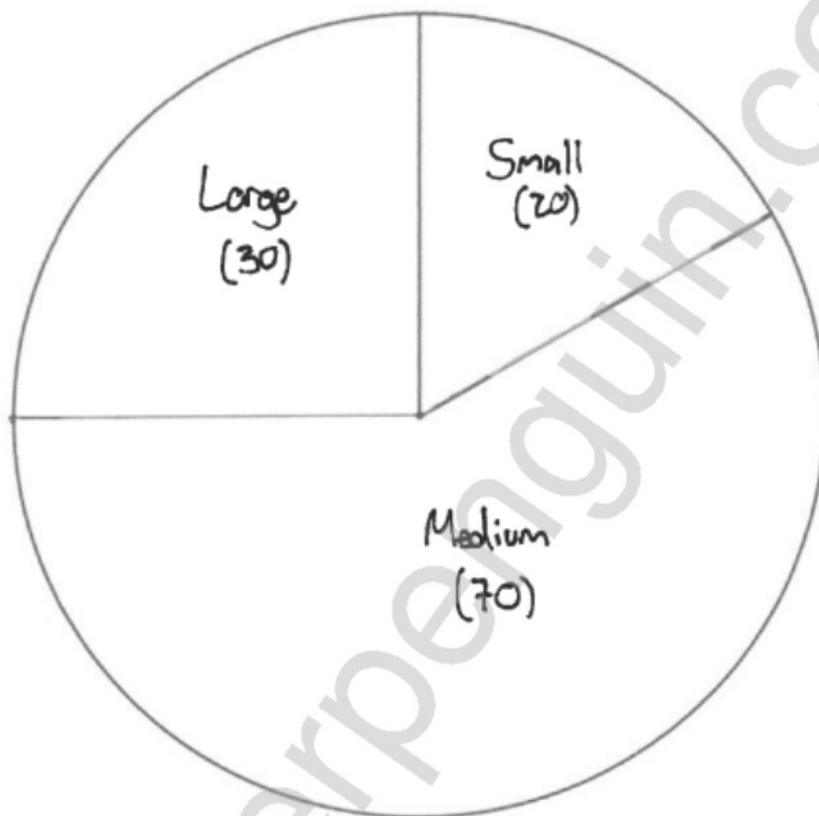
\$ 1.4 million [3]

- 5 One week a shop sells 120 jars of ketchup.
The table shows the number of jars of each size sold.

Size	Small	Medium	Large
Number sold	20	70	30
Angle	60	210	90

Total = 120

Show this information in a pie chart.



[3]

$$\begin{aligned} 120 \text{ people} &= 360^\circ \\ \div 120 &\quad \div 120 \\ 1 \text{ person} &= 3^\circ \end{aligned}$$

- 2 The table shows the number of each type of bird seen in a garden on Monday.

Type of bird	Frequency	Pie chart sector angle
Goldfinch	8	96°
Jay	6	72°
Starling	11	132°
Robin	5	60°

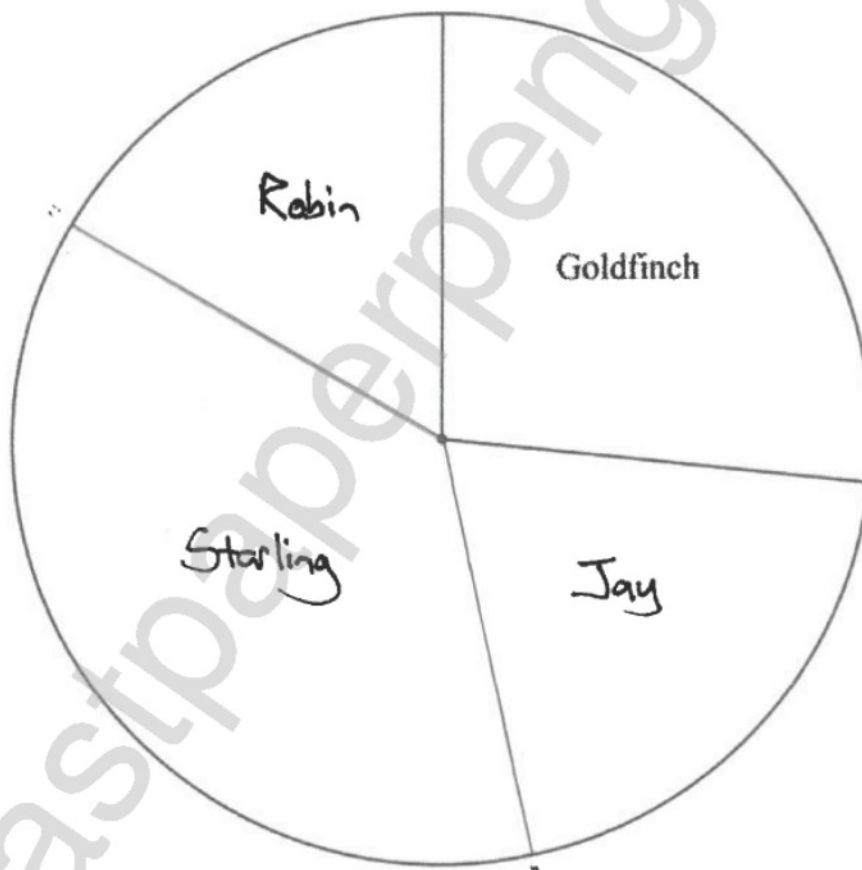
- (a) Find the percentage of the birds that are Starlings. total = 30

$$\frac{11}{30} \times 100 = 36.7^\circ$$

36.7 % [2]

- (b) (i) In the table, complete the column for the pie chart sector angle. [2]

- (ii) Complete the pie chart to show the information in the table.



$$\begin{aligned} 8 \text{ birds} &= 96^\circ \\ \div 8 &\quad \downarrow \div 8 \\ 1 \text{ bird} &= 12^\circ \end{aligned}$$

[2]

- 2 Thibault records the number of cars of each colour in a car park.

Colour	Black	White	Silver	Red
Number of cars	8	5	4	3

Total = 20

He draws a pie chart to show this information.

Calculate the sector angle for the red cars.

$$\begin{array}{l} 20 \text{ cars} = 360^\circ \\ \div 20 \downarrow \quad \quad \quad \downarrow \div 20 \\ 1 \text{ car} = 18^\circ \\ \times 3 \downarrow \quad \quad \quad \downarrow \times 3 \\ 3 \text{ cars} = 54^\circ \end{array}$$

54°

[2]

- 5 There are 20 cars in a car park and 3 of the cars are blue.

- (a) James wants to draw a pie chart to show this information.

Find the angle of the sector for the blue cars in this pie chart.

$$\begin{array}{l} 20 \text{ cars} = 360^\circ \\ \div 20 \downarrow \quad \quad \quad \downarrow \div 20 \\ 1 \text{ car} = 18^\circ \\ \times 3 \downarrow \quad \quad \quad \downarrow \times 3 \\ 3 \text{ cars} = 54^\circ \end{array}$$

54°

[2]

- (b) One of the 20 cars is picked at random.

Find the probability that this car is **not** blue.

$\frac{17}{20}$

[1]



The pie chart shows the favourite sports of all the students at a school.
180 students chose running as their favourite sport.

Work out

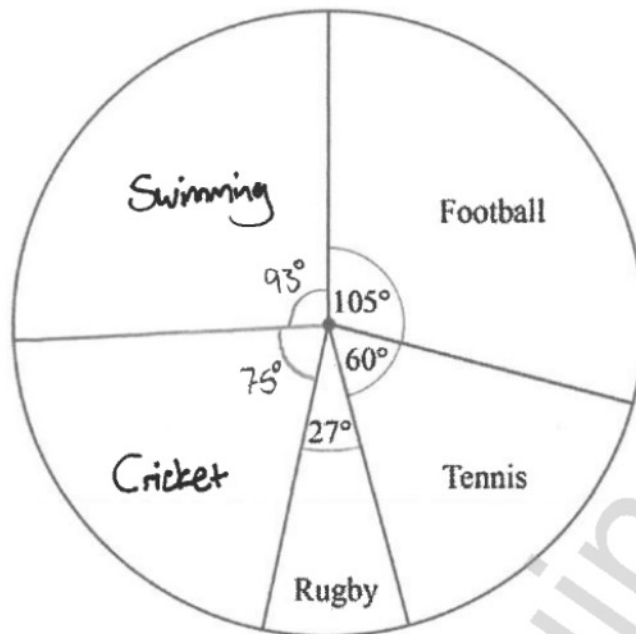
- (a) the total number of students at the school,

$$\begin{aligned} \text{Running} &= 180 : 180 \text{ people} = 90^\circ \\ &\rightarrow 720 \text{ people} = 360^\circ \times 4 \end{aligned} \quad \underline{\quad 720 \quad} [1]$$

- (b) the number of students that chose football as their favourite sport.

$$\begin{aligned} &180 \text{ people} = 90^\circ \\ &\div 180 \rightarrow 1 \text{ person} = 0.5^\circ \div 180 \\ \text{Angle for Football:} & \\ &360 - (90 + 45 + 60) = 165^\circ \\ &165 \div 0.5 = \underline{330 \text{ students}} \end{aligned} \quad \underline{\quad 330 \quad} [2]$$

- 8 (a) Jean asks 600 people to choose their favourite sport.
The pie chart shows some of this information.



- (i) Show that 100 people choose tennis.

$$\begin{aligned} 600 \text{ people} &= 360^\circ \\ \div 600 \quad \downarrow & \quad \downarrow \div 600 \\ 1 \text{ person} &= 0.6^\circ \end{aligned} \quad \quad \quad 60 \div 0.6 = \underline{100 \text{ people}} \quad [1]$$

- (ii) Work out how many people choose rugby.

$$27 \div 0.6 = 45 \quad \quad \quad \underline{45} \quad [2]$$

- (iii) 125 people choose cricket and the rest choose swimming.

Complete the pie chart to show this information.

$$\begin{aligned} \text{Cricket:} \quad & 1 \text{ person} = 0.6^\circ \\ \times 125 \quad \downarrow & \quad \downarrow \times 125 \\ 125 \text{ people} &= 75^\circ \end{aligned} \quad [2]$$