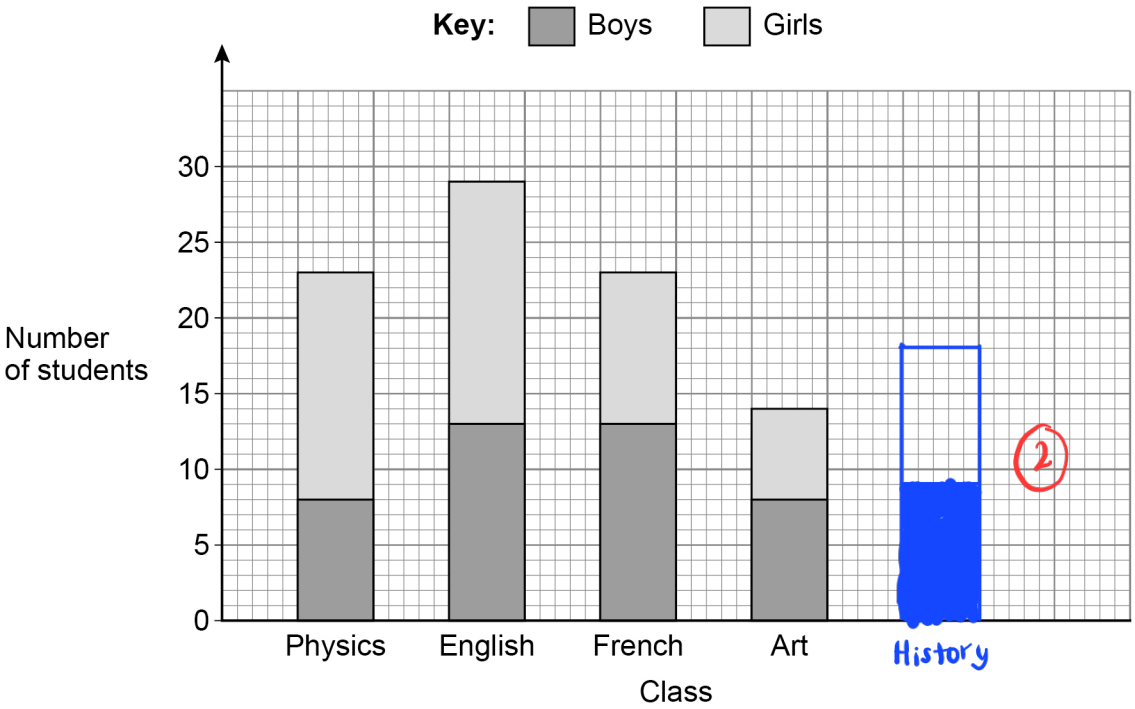
1 The composite bar chart shows the number of students in some classes.



1 (a) How many boys are in the Physics class?

[1 mark]

Answer 8 (1)

1 (b) How many girls are in the English class?

[1 mark]

29 - 13

Answer 16 (1)

1 (c) Which **two** classes have the same total number of students?

[1 mark]

Answer Physics (1) and French

1 (d) In the History class

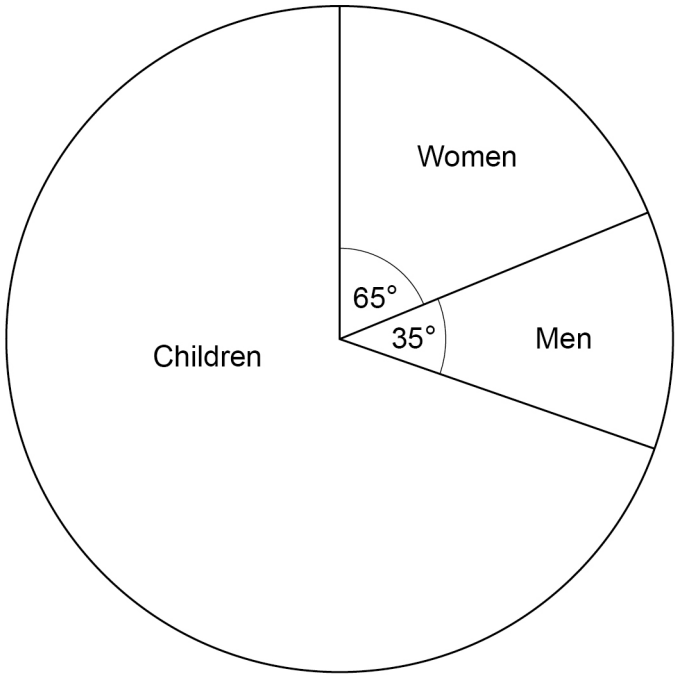
there are 18 students

number of boys = number of girls

Show this information on the bar chart.

[2 marks]

2 The pie chart shows information about people at a theme park.



Not drawn accurately

There were 450 **more** women than men.

Work out the number of children.

[3 marks]

$65^\circ - 35^\circ = 30^\circ$

$30^\circ = 450$ (1)

children $= 360^\circ - 65^\circ - 35^\circ = 260^\circ$

No. of children $= \frac{260^\circ}{30^\circ} \times 450 = 3900$ (1)

Answer 3900 (1)

3 Katy records the number of cars using a drive-through each hour for 24 hours.

Here are the results.

36	20	37	53	42	41	24	18	39	35	40	47
38	17	23	18	13	35	10	7	6	18	31	57

Katy makes this tally and frequency chart to put the data into groups.

Number of cars	Tally	Frequency
0 to 10		
10 to 20		
20 to 30		
30 to 40		
40 to 50		

Make **two** criticisms of Katy's tally and frequency chart.

You do **not** need to complete the chart.

[2 marks]

Criticism 1 10 can go in two categories (1)

Criticism 2 No category for 53 (1)

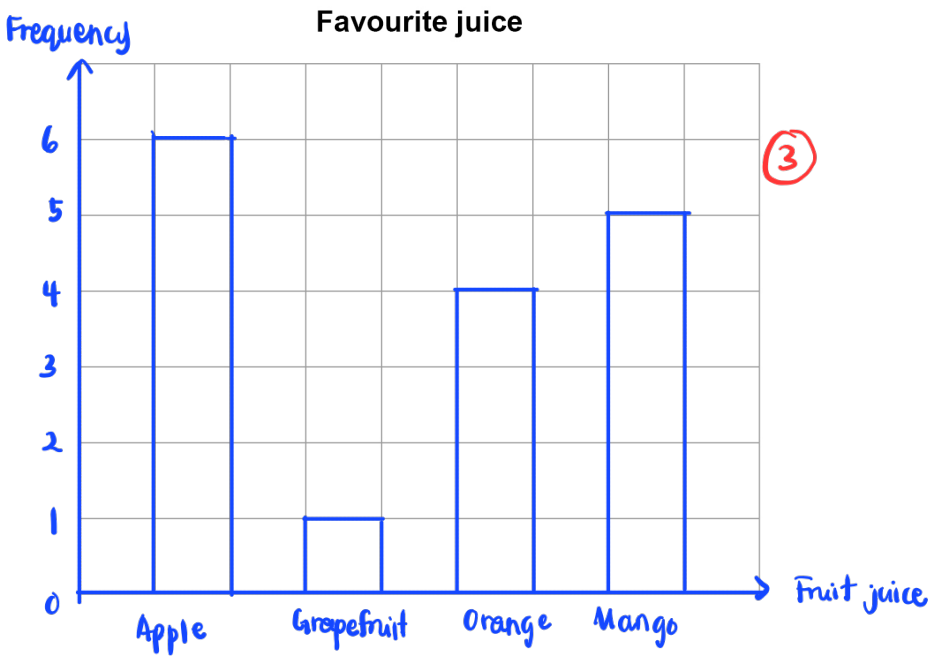
4 16 people were asked to name their favourite fruit juice.

Here are the results.

Favourite juice	Frequency
Apple	6
Grapefruit	1
Orange	4
Mango	5

4 (a) On the grid, draw a bar chart to represent the results.

[3 marks]

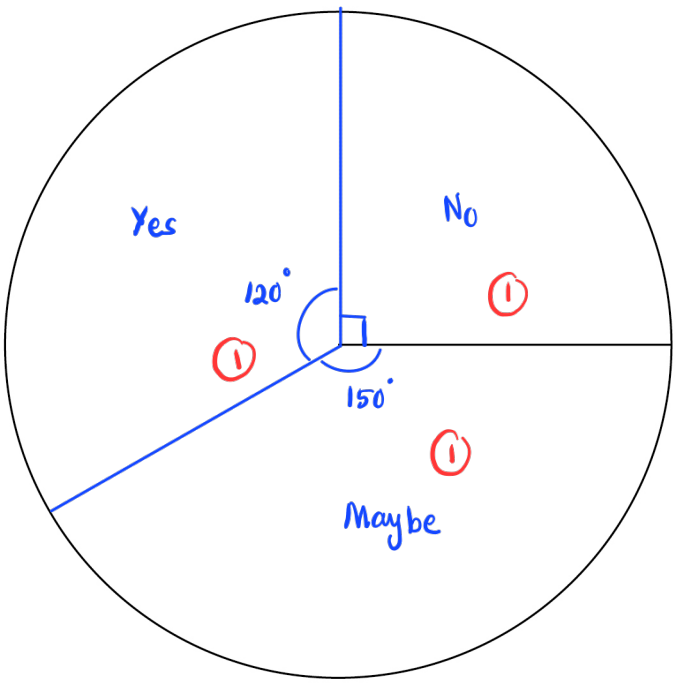


5 60 people were asked if they would vote in an election.

- $\frac{1}{4}$ of the people said No
- 20 people said Yes
- The rest said Maybe

Draw and label a pie chart to show this information.

[3 marks]



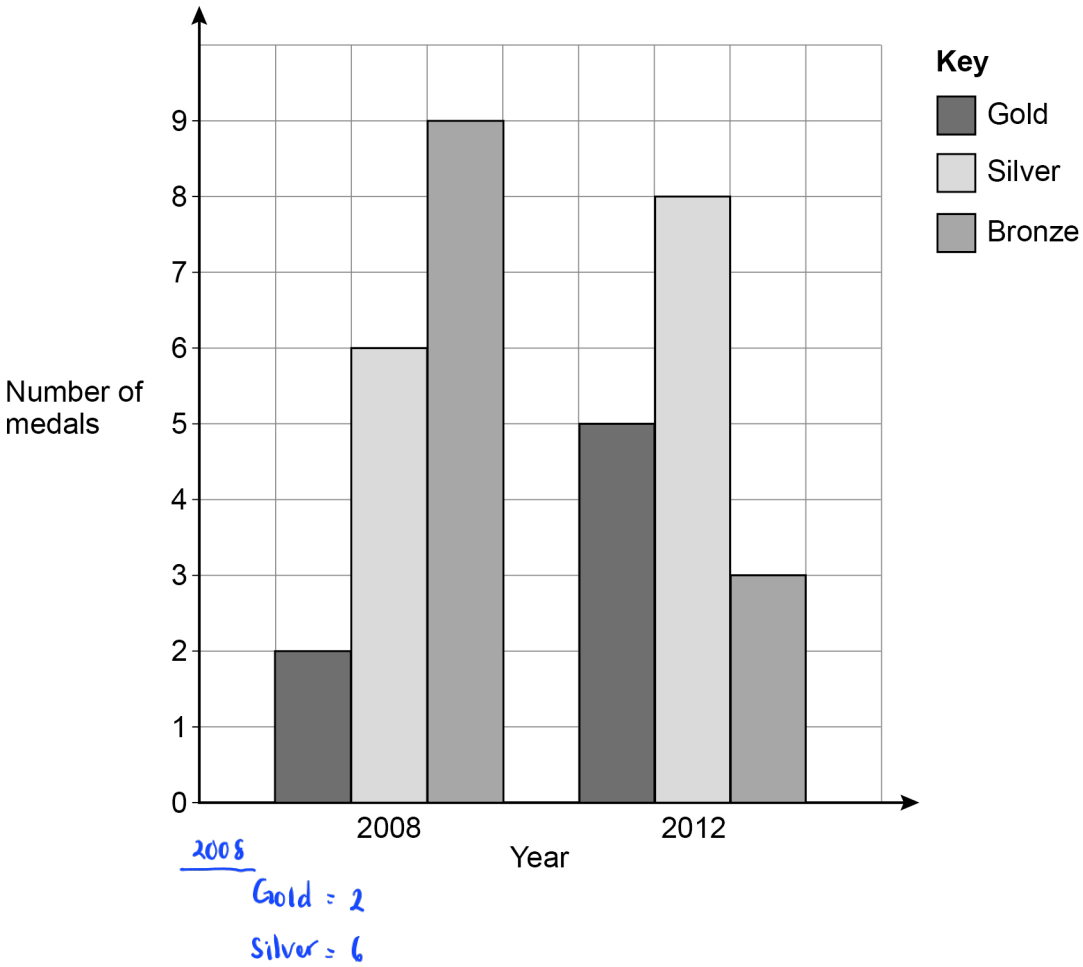
No: $\frac{1}{4} \times 60 = 15$ $\frac{15}{60} \times 360^\circ = 90^\circ$

Yes: 20 $\frac{20}{60} \times 360^\circ = 120^\circ$

Maybe = 60 − 20 − 15

= 25 $\frac{25}{60} \times 360^\circ = 150^\circ$

6 The bar chart shows the number of medals won by a country at events in 2008 and 2012



2008
Gold = 2
Silver = 6

6 (a) Complete this statement about the medals won by the country in 2008

[1 mark]

number of Silver medals = 3 (1) × number of Gold medals

6 (b) Show that the country won **more** medals in 2008 than in 2012

[2 marks]

2008 : 2 + 6 + 9 = 17 (1)

2012 : 5 + 8 + 3 = 16 (1)

6 (c) At the 2016 event the country won an **equal** number of each type of medal.

Here is a statement about the medals won by the country in 2016

The total number of medals **cannot** be 25

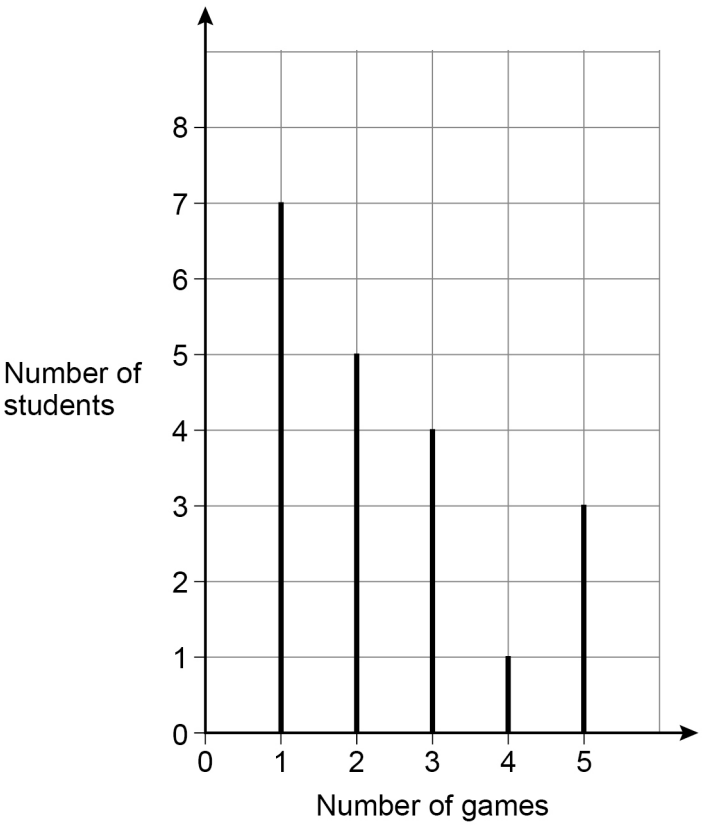
Give a reason why the statement is correct.

[1 mark]

25 is not a multiple of 3. (1)

7 20 students are asked how many video games they played last month.

The chart shows information about the results.



7 (a) How many students played **more** than 2 games?

[1 mark]

4 + 1 + 3 = 8

Answer 8

7 (b) Work out the mean number of games played.

Give your answer as a decimal.

[3 marks]

mean = $\frac{(1\times 7)+(2\times 5)+(3\times 4)+(4\times 1)+(5\times 3)}{20}$ (1)

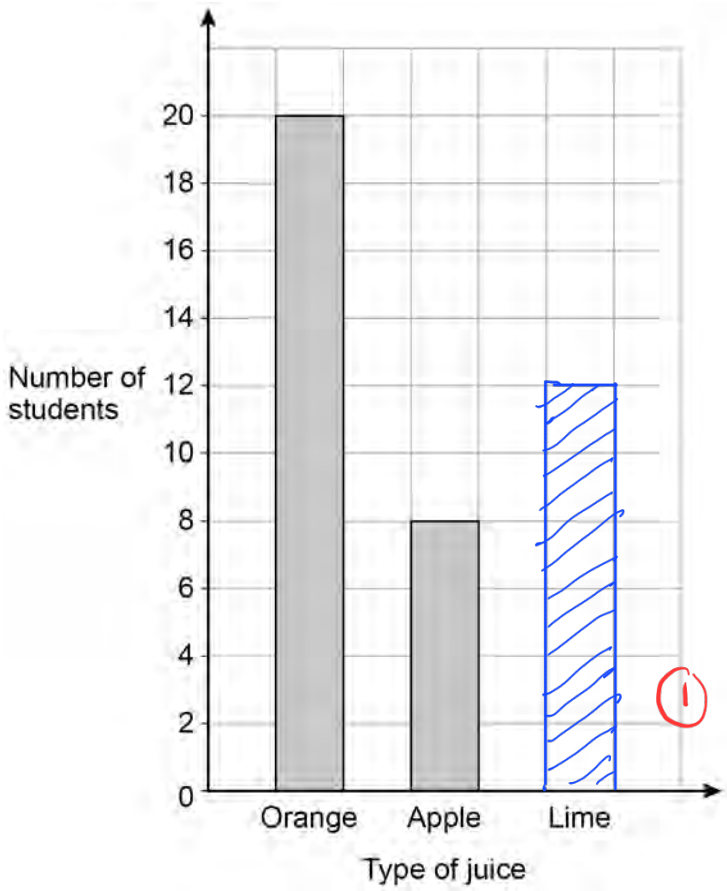
$= \frac{7+10+12+4+15}{20}$ (1) $= \frac{48}{20}$

$= 2.4$

Answer 2.4 (1)

8 Students choose juice with their school meal in the ratio

orange : apple : lime = 5 : 2 : 3



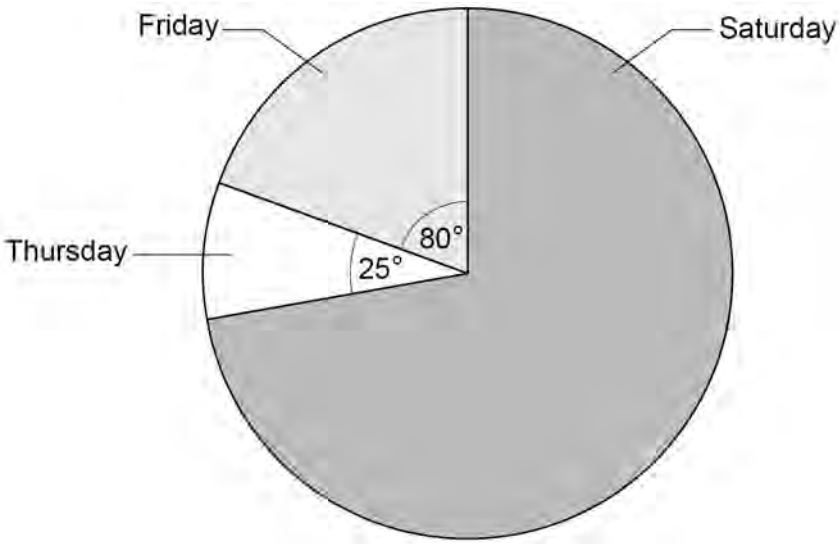
Complete the bar chart.

[3 marks]

$\frac{3}{5} \times 20 = 12$ (1) (1)

9 The pie chart shows information about people at a fair during three days.

Not drawn accurately



There were 132 **more** people on Friday than on Thursday.

Work out the number of people on Saturday.

[3 marks]

80 - 25 = 55 (1)

$\frac{132}{55}$ = 2.4 people per 1 degree

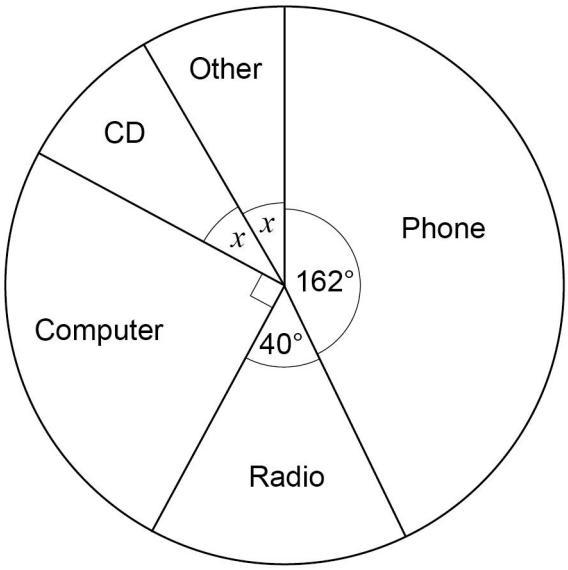
Saturday = 360 - 80 - 25 = 255 degree (1)

No. of people on saturday = 255 × 2.4 = 612 (1)

Answer 612

10 Some people were asked for the main way they listen to music.

A pie chart is drawn to represent their answers.



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10 (a) Work out the size of angle x.

[2 marks]

$2x + 90 + 40 + 162 = 360$ (1)

$2x + 292 = 360$

$2x = 68$

$x = 34$ (1)

Answer 34 degrees

10 (b) 135 people said Computer.

How many people said Phone?

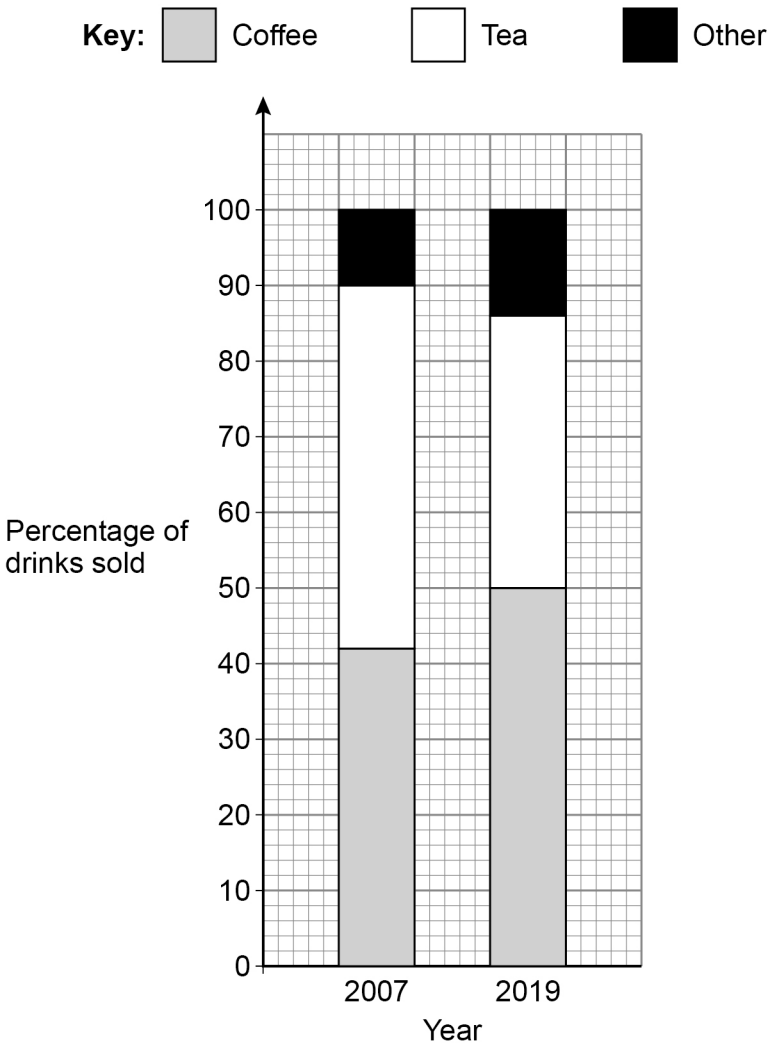
[3 marks]

$\frac{135}{90} \times 162 = 1.5 \times 162$ (1) (1)

$= 243$ (1)

Answer 243

11 The composite bar chart shows information about the **percentage** of drinks sold by a café in 2007 and 2019



11 (a) In 2007 the café sold a total of 24 000 drinks.

How many **more** teas than coffees were sold?

[2 marks]

Tea : 90 − 42 = 48 %

Coffee : 42%

48 − 42 = 6 % (1)

$\frac{6}{100} \times 24000 = 1440$

Answer 1440 (1)

11 (b) Were more coffees sold at the café in 2019 than in 2007 ?

Tick a box.

☐ Yes ☐ No ☑ Cannot tell

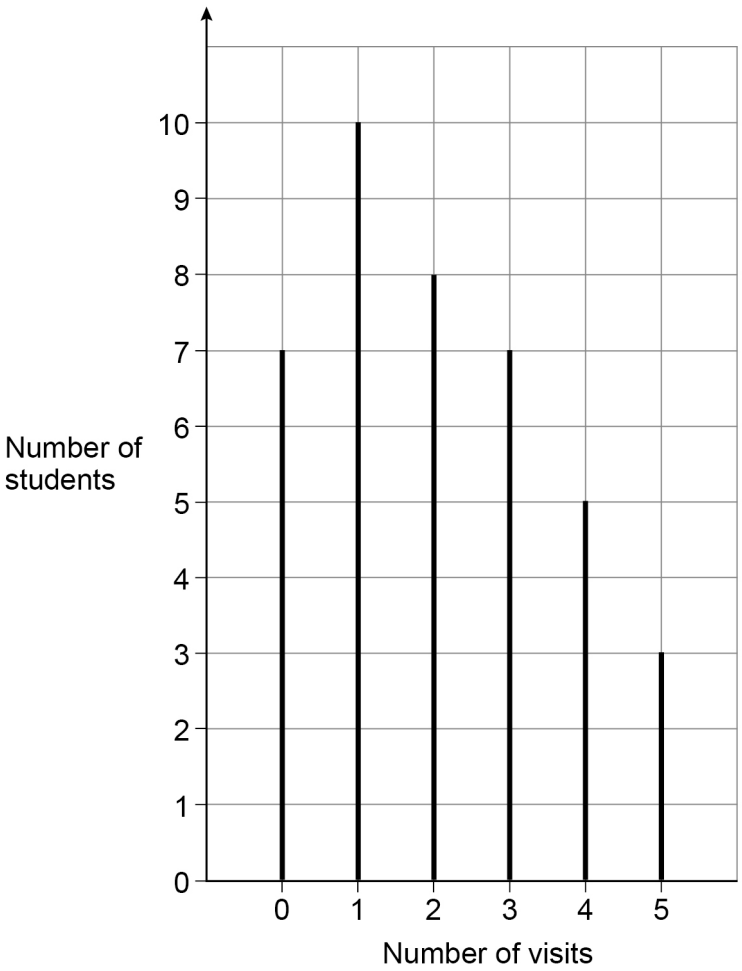
Give a reason for your answer.

[1 mark]

The total numbers sold in 2019 were unknown.

12 40 students were asked the number of visits they made to a gym one week.

The chart shows information about the results.



12 (a) Write down the modal number of visits.

[1 mark]

Answer 1 0

12 (b) Work out the mean number of visits.

Give your answer as a decimal.

[3 marks]

$\text{mean} = \dfrac{(0\times 7)+(1\times 10)+(2\times 8)+(3\times 7)+(4\times 5)+(5\times 3)}{40}$ (1)

$= \dfrac{10+16+21+20+15}{40}$ (1)

$= \dfrac{82}{40} = 2.05$ (1)

Answer 2.05

12 (c) One of the 40 students is chosen at random.

Work out the probability that the student visited the gym **at least** once.

[2 marks]

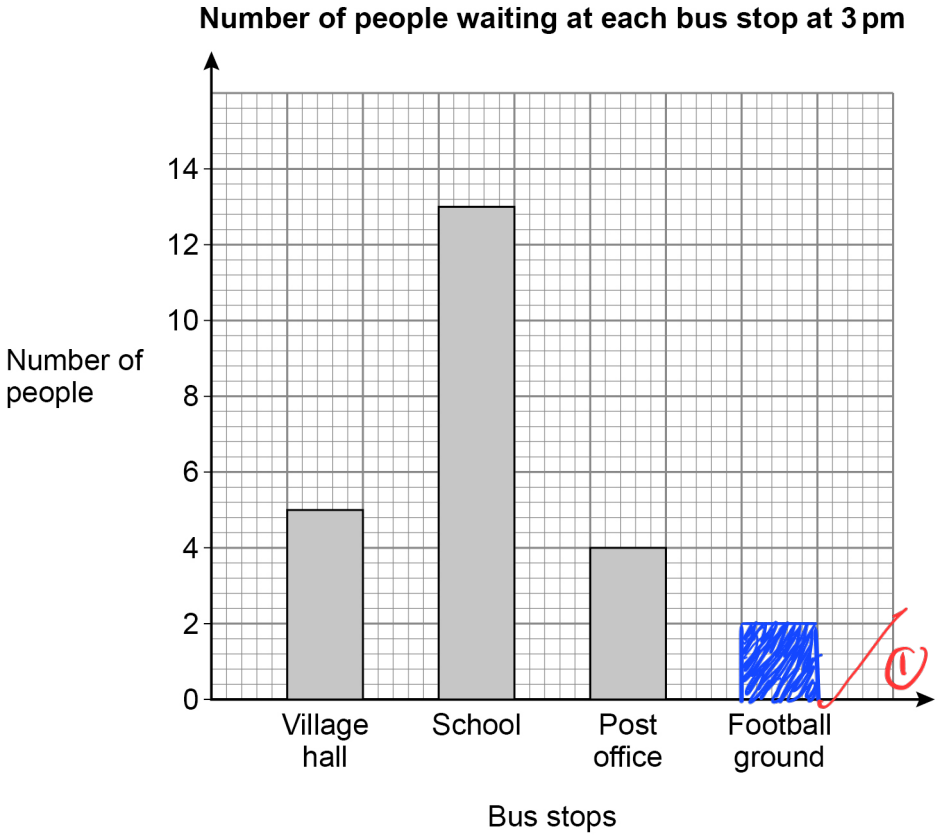
visit at least once : $10+8+7+5+3 = 33$ (1)

$\dfrac{33}{40}$

Answer $\dfrac{33}{40}$ (1)

13 A village has four bus stops.

The bar chart shows information about the people at the bus stops at **3 pm** one day.



13 (a) Two people were at the Football ground bus stop.

Show this information on the bar chart.

[1 mark]

13 (b) How many **more** people were at the School bus stop than at the Post office bus stop?

[1 mark]

13 − 4 = 9

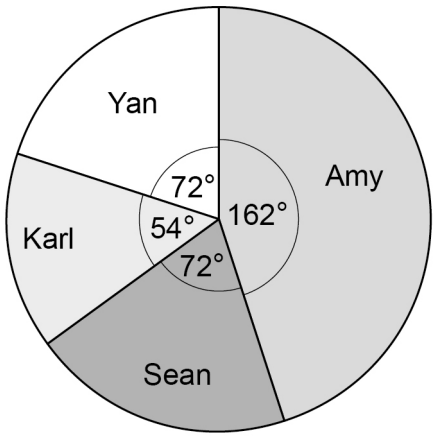
Answer 9 ✓ 1

14 Four people are taking part in a television talent show.

Here are Amy's marks from the 6 judges.

8	9	9	6	9	10

The pie chart represents the phone vote.



Amy's total score is found by

4 × the **mean** of her marks
+
her **percentage** of the phone vote

Work out Amy's total score.

[4 marks]

mean of marks = $\frac{8+9+9+6+9+10}{6} = 8.5$ ✓(1)

Percentage of phone vote = $\frac{162^\circ}{360^\circ} \times 100\% = 45\%$ ✓(1)

Total score = $(4 \times 8.5) + 45$ ✓(1)

= 79 ✓(1)

Answer 79