




STATISTICAL DIAGRAMS

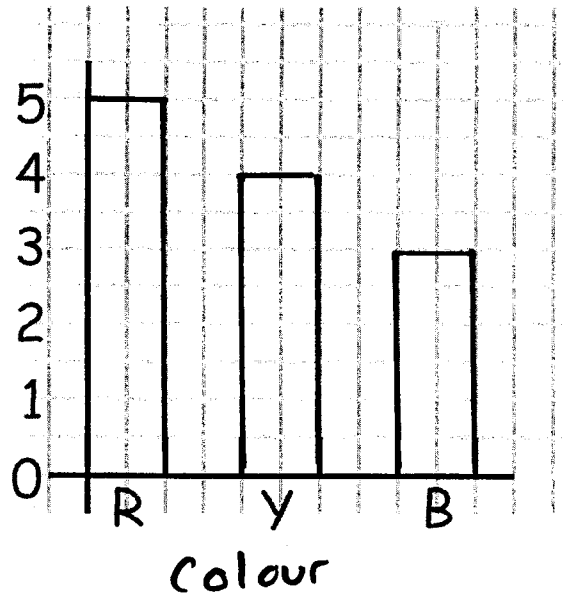
| Page | Description |
|------|---|
| 1 | Tally chart, pictogram, bar chart and pie chart |
| 2 | Frequency Diagram and bar chart |
| 3 | Draw pie charts |
| 4 | Read pie charts |
| 5 | Scatter graphs |
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| 7 | Cumulative frequency |
| 8 | Cumulative frequency |
| 9 | Draw a histogram |
| 10 | Read from a Histogram |

Favourite Colours




Favourite Colour

| Colour | Tally | Total |
|--------|---|-------|
| Red |  | 5 |
| Yellow |  | 4 |
| Blue |  | 3 |
| | | 12 |

TOTAL



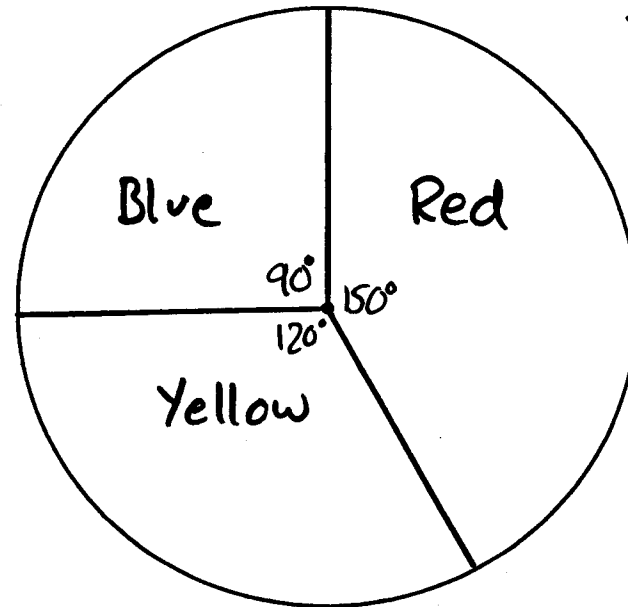
Pictogram

| Colour | |
|--------|---|
| Red |  |
| Yellow |  |
| Blue |  |



represents 2

Pie Chart



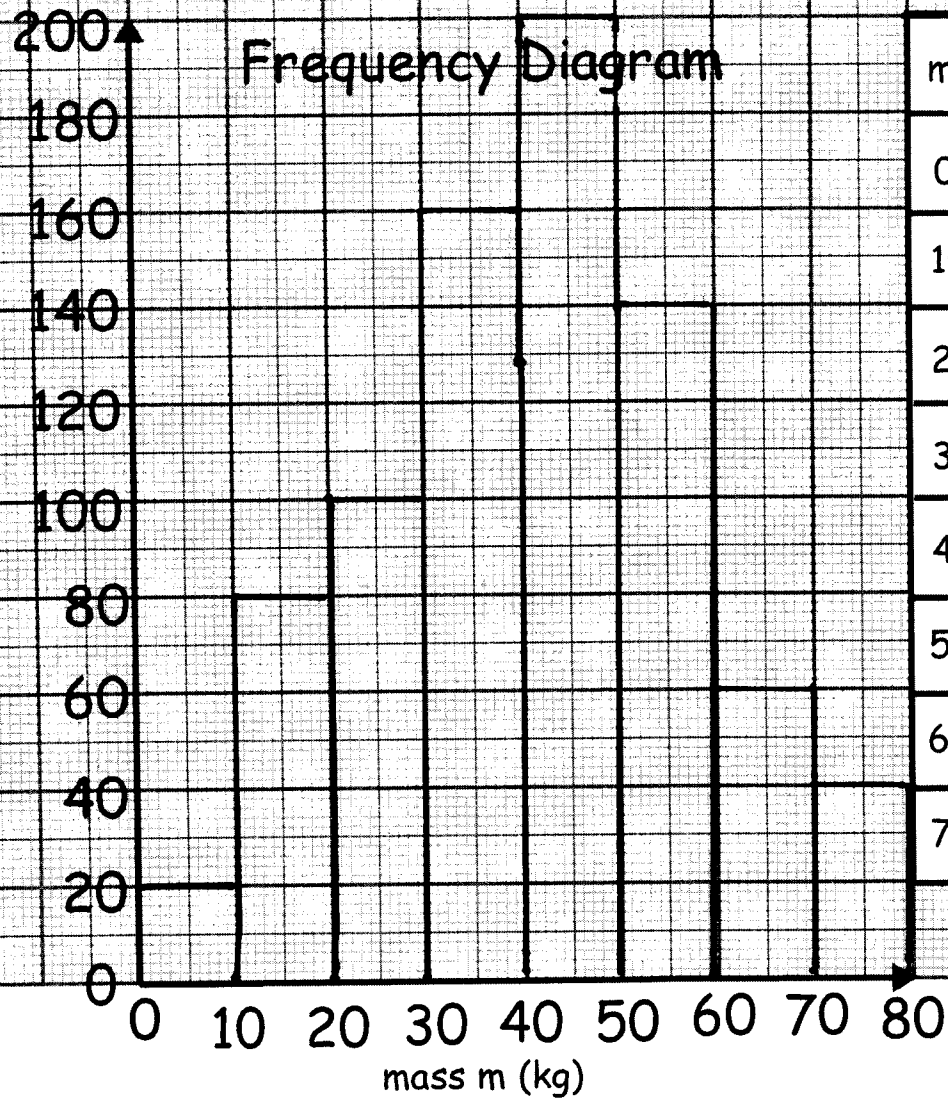
$$360 \div 12 = 30$$

$$\text{Red } 5 \times 30 = 150^\circ$$

$$\text{Yellow} = 4 \times 30 = 120^\circ$$

$$\text{Blue} = 3 \times 30 = 90^\circ$$

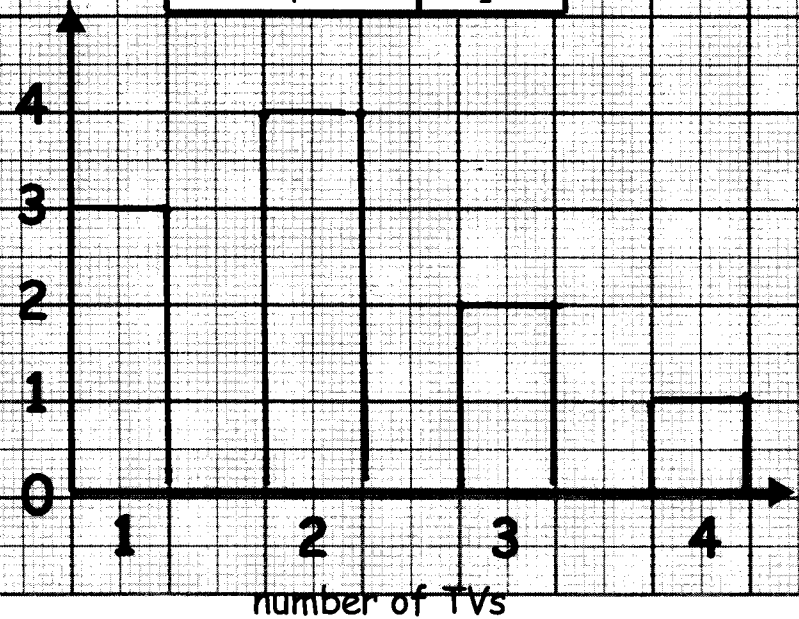
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| mass m (kg) | frequency |
|------------------|-----------|
| $0 \leq m < 10$ | 20 |
| $10 \leq m < 20$ | 80 |
| $20 \leq m < 30$ | 100 |
| $30 \leq m < 40$ | 160 |
| $40 \leq m < 50$ | 200 |
| $50 \leq m < 60$ | 140 |
| $60 \leq m < 70$ | 60 |
| $70 \leq m < 80$ | 40 |

Bar Chart

| number of TVs | frequency |
|---------------|-----------|
| 1 | 3 |
| 2 | 4 |
| 3 | 2 |
| 4 | 1 |



Draw a bar chart for this information on number of TVs per household.

For continuous data

Draw a frequency diagram for this information on mass of a group of people.

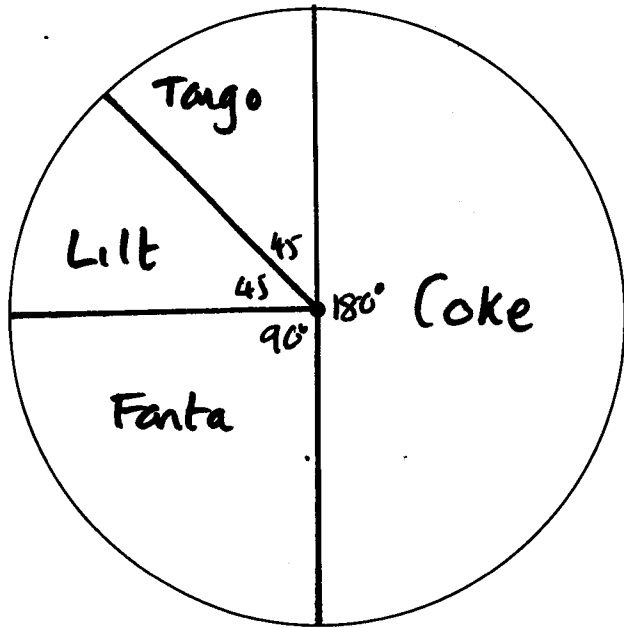
For discrete data

Tally Chart of favourite drinks in Year 7

| Drink | Tally | Total |
|-------|-------|-------|
| Coke | | 4 |
| Fanta | | 2 |
| Lilt | | 1 |
| Tango | | 1 |

Total 8

Angle per vote is $360 \div 8 = 45^\circ$

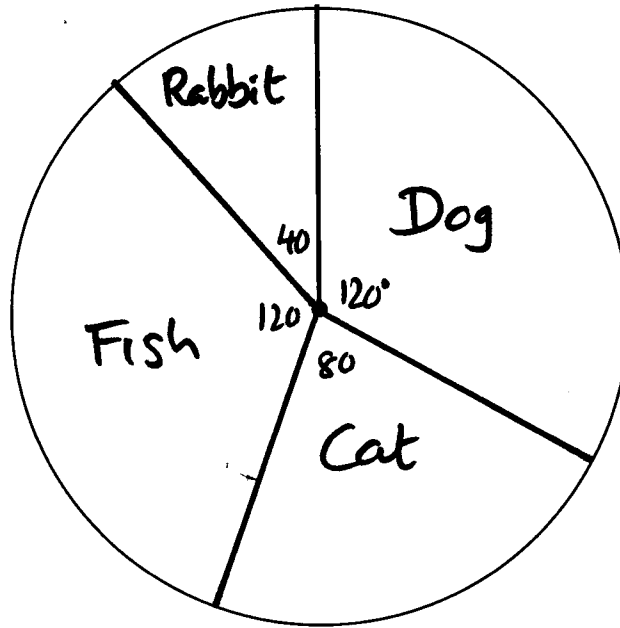


Tally Chart of favourite pet in Year 7

| Drink | Tally | Total |
|--------|-------|-------|
| Dog | | 3 |
| Cat | | 2 |
| Fish | | 3 |
| Rabbit | | 1 |

Total 9

Angle per vote is $360 \div 9 = 40^\circ$

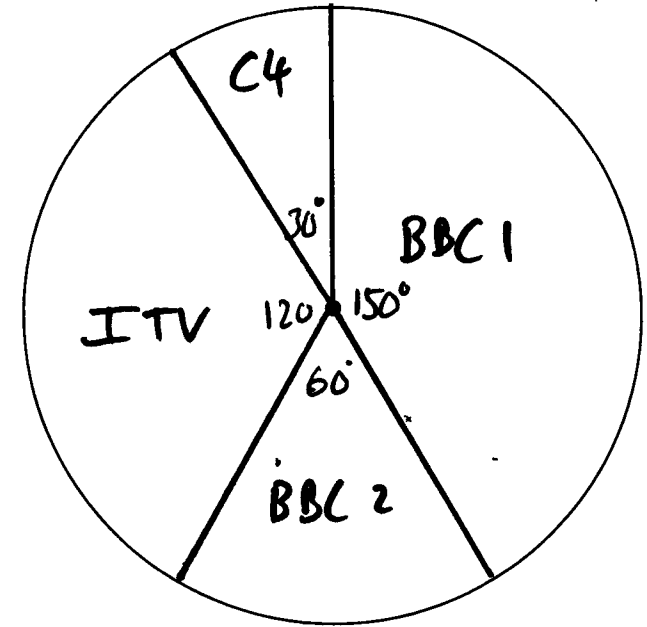


Tally Chart of favourite Channel in Year

| Drink | Tally | Total |
|-------|-------|-------|
| BBC 1 | | 5 |
| BBC 2 | | 2 |
| ITV | | 4 |
| C4 | | 1 |

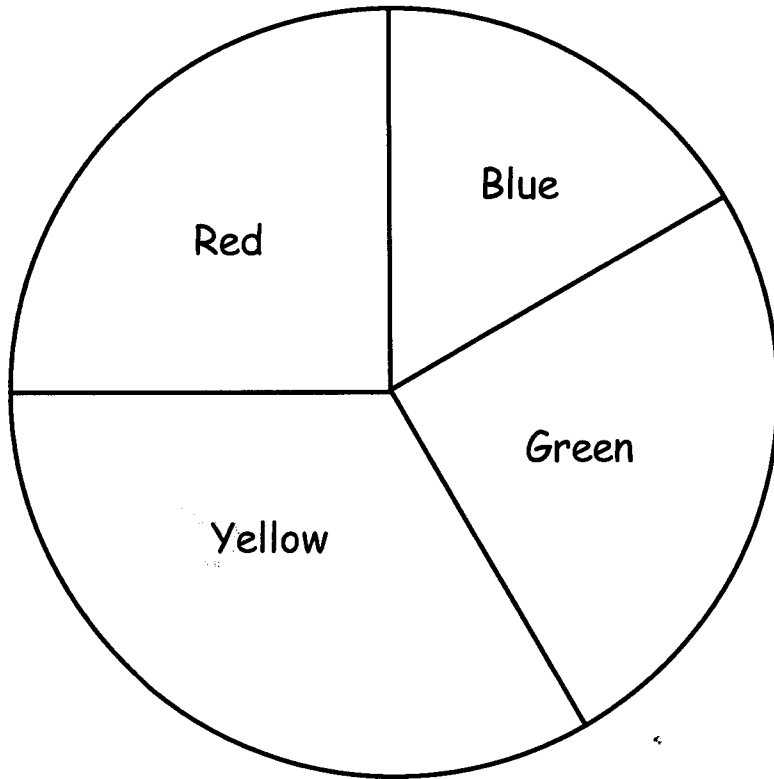
Total 12

Angle per vote is $360 \div 12 = 30^\circ$



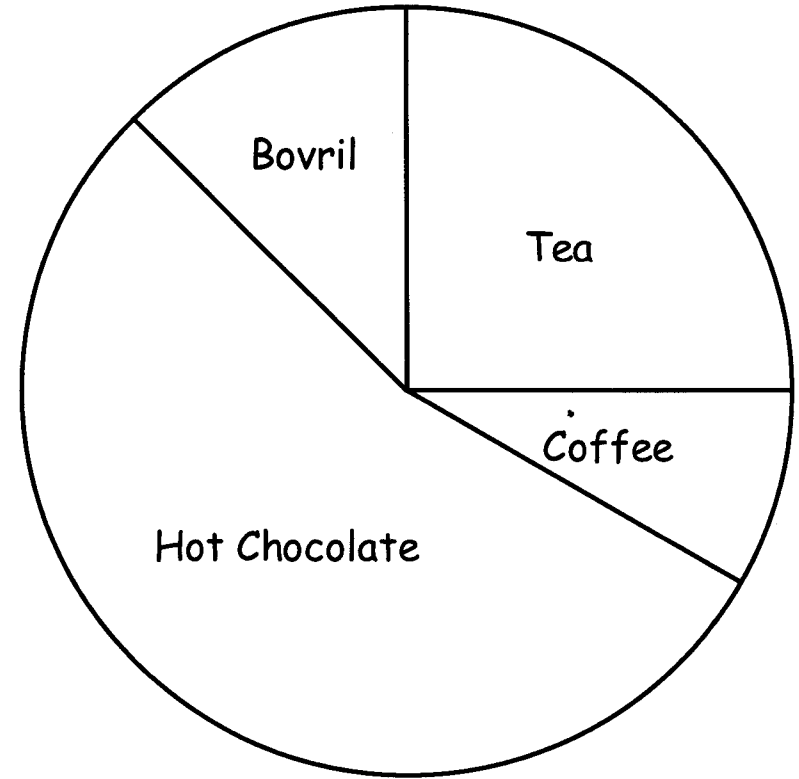
Interpreting a Pie Chart

60 people were asked about their favourite colour.



| Colour | Angle | Frequency |
|--------|-------|---|
| Blue | 60 | $\frac{\text{Angle}}{360} \times 60 = 10$ |
| Green | 90 | 15 |
| Yellow | 120 | 20 |
| Red | 90 | 15 |

72 people were asked about their favourite hot drink.



| Drink | Angle | Frequency |
|--------|-------|---|
| Tea | 40 | $\frac{\text{Angle}}{360} \times 72 = 18$ |
| Coffee | 30 | 6 |
| H.C. | 195 | 39 |
| Bovril | 45 | 9 |

Scatter graphs

Plot the points from each table on the axes below

Test scores out of 10.

| Maths Paper 1 | Maths Paper 2 |
|---------------|---------------|
| 1 | 2 |
| 2 | 3 |
| 4 | 2 |
| 5 | 3 |
| 5 | 5 |
| 6 | 4 |
| 7 | 6 |
| 8 | 3 |
| 9 | 7 |
| 10 | 6 |

| Music | Art |
|-------|-----|
| 1 | 9 |
| 2 | 7 |
| 2 | 8 |
| 4 | 6 |
| 4 | 7 |
| 5 | 5 |
| 6 | 5 |
| 7 | 4 |
| 8 | 3 |
| 10 | 1 |

| Maths | French |
|-------|--------|
| 1 | 5 |
| 2 | 3 |
| 2 | 8 |
| 5 | 1 |
| 5 | 5 |
| 5 | 8 |
| 6 | 7 |
| 8 | 1 |
| 8 | 6 |
| 9 | 4 |

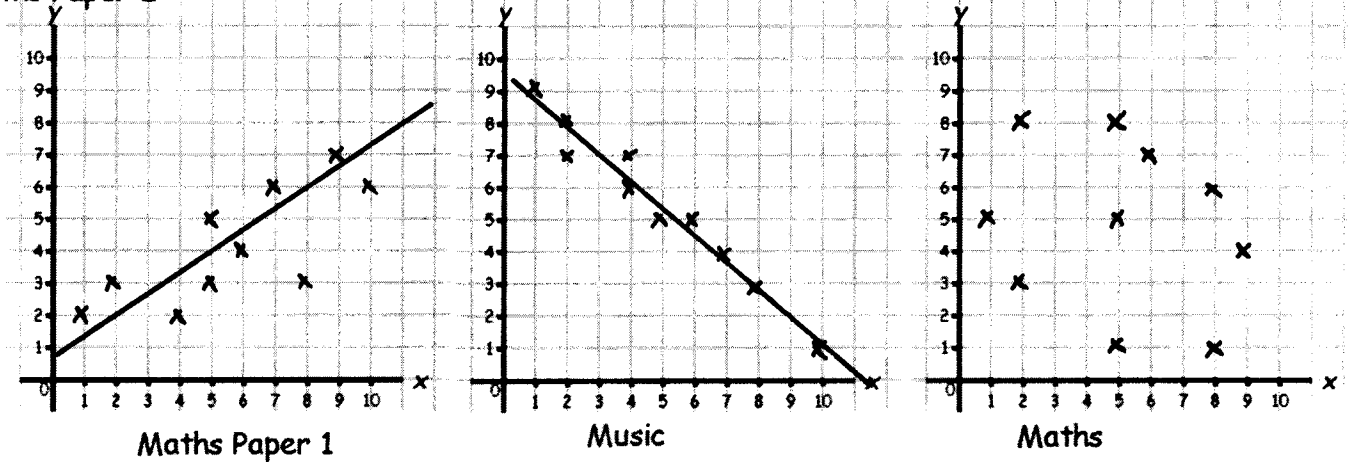
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②

Maths Paper 2

Art

French



For each scatter graph describe the correlation and where possible draw a line of best fit.

① Positive correlation

② Strong negative correlation

③ No correlation.

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