

Draw Pie Charts – iHD1

How many degrees is each vote worth?

A pie chart is made from a divided circle, each part clearly labelled. A circle is made from 360° . If 360 people are surveyed then each person's vote will count as 1° . 360 people are not always surveyed so your first task is to work out how many degrees ($^\circ$) each person's vote is worth. If the number of people surveyed is 90 then each person's vote is worth 4° because $90 \times 4^\circ = 360^\circ$. This can be calculated by **dividing 360° by the total number of votes**: $360^\circ \div 90 = 4^\circ$.

We call 4 the **multiplier**. The **multiplier 4** takes $90 \rightarrow 360$.

Your Turn!!

- If 120 people vote, how many degrees is each person's vote worth in a pie chart?
- What division calculation gives you this answer?

The *frequency* shows the number of people choosing each option.

Example

- Complete the table and
- draw the pie chart for the favourite soaps.

Favourite Soap	Frequency	Angle in Pie Chart
Eastenders	20	
Coronation Street	45	
Neighbours	55	
Total	120	360°

Solution i)

Frequency	Angle in Pie Chart
$20 \rightarrow \times 3$	60°
$45 \rightarrow \times 3$	135°
$55 \rightarrow \times 3$	165°
$120 \rightarrow \times 3$	360°

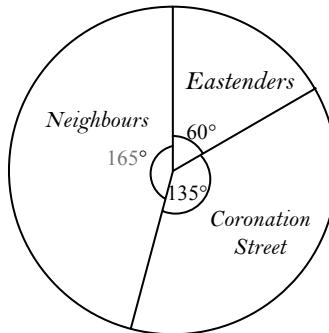
The total of the angles is always 360° !

The 'multiplier'

To complete the table multiply each number in the table by the multiplier, in this case 3.

Solution ii)

Always include a **Title**,
"Pie Chart showing etc"



Your Turn!!

- Copy and complete the tables below:

Creature	Frequency	Angle in Pie Chart
Hamsters	10	
Rats	20	
Mice	15	
Total		

Creature	Frequency	Angle in Pie Chart
Insects	410	
Birds	200	
Reptiles	110	
Total		

Hint: In this case we do not have votes but creatures. But still we have a **Frequency Total**. The **Frequency Total** this time is 45. Start by finding the multiplier that takes $45 \rightarrow 360$.

Hint: The **frequency total** this time is 720. The multiplier that takes $720 \rightarrow 360$ is $\frac{1}{2}$!

- Draw the pie chart for the first table of data (hamsters, rats & mice).

RAPID 'ACID' TEST – Blank out the page above before answering these!

- Complete the pie chart tables
 - Draw the pie chart for data set ii)

i)

Car Colour	Frequency	Angle in Pie Chart
Red	5	
Green	25	
Blue	15	
Total		

ii)

Hair Colour	Frequency	Angle in Pie Chart
White	10	
Dark	20	
Blonde	15	
Other	45	
Total		