Completing Pie Charts

Pie charts are a circle split into different sized sections where each section of the pie chart represents a different category.

They must have a key but do not have to contain any numerical values

Pie charts can be used to:

- represent univariate data
- compare 2 or more sets of unpaired data.

For data sets that are unequal in size we should use proportionate **comparative pie charts**

IMPORTANT:

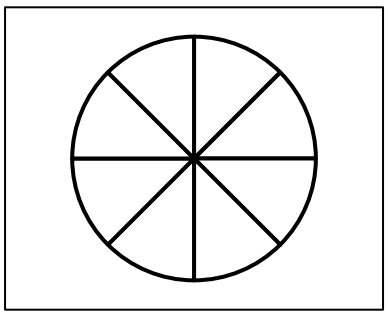
They show us the ***proportion*** of data within various categories not the total

Without knowing the total population for a pie chart we cannot know the total of each category but we can compare the ***proportions***

To calculate the angle for a given category we use the formula:

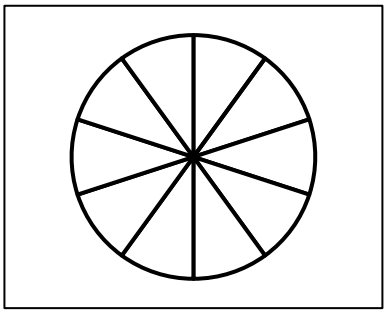
$$\frac{\textbf{\textit{frequency}}}{\textbf{\textit{grand total}}} \times 360$$

For each of the following data sets, complete the pie chart using proportions



House	Frequency
Red	2
Yellow	1
Blue	1
Green	4

Price	Frequency
£0 ≤ p < £5	20
£5 ≤ p < £10	30
£10 ≤ p < £15	40

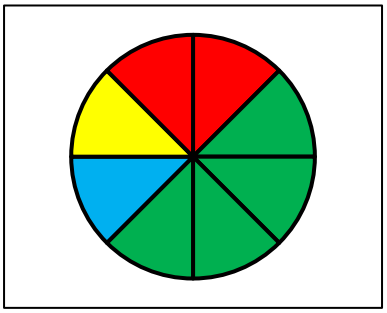


For each of the following tables of data, calculate the angles to be drawn for the pie chart

Year Group	Frequency	Angle
Year 7	130	
Year 8	150	
Year 9	146	
Year 10	156	
Year 11	138	
Total		

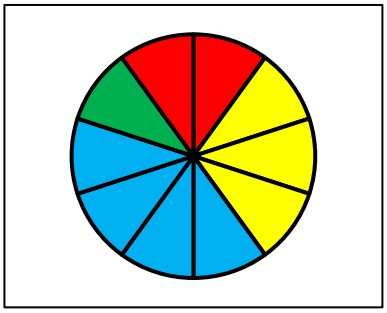
Animal	Frequency	Angle
Lion	8	
Leopard	5	
Elephant	34	
Giraffe	21	
Rhino	2	
Total		

Solutions



House	Frequency
Red	2
Yellow	1
Blue	1
Green	4

Price	Frequency
£0 ≤ p < £5	20
£5 ≤ p < £10	30
£10 ≤ p < £15	40



For each of the following tables of data, calculate the angles to be drawn for the pie chart

Year Group	Frequency	Angle
Year 7	130	130 ÷ 720 x 360 = 65
Year 8	150	150 ÷ 720 x 360 = 75
Year 9	146	146 ÷ 720 x 360 = 73
Year 10	156	156 ÷ 720 x 360 = 78
Year 11	138	138 ÷ 720 x 360 = 69
Total	720	

Animal	Frequency	Angle
Lion	8	8 ÷ 70 x 360 = 41
Leopard	5	5 ÷ 70 x 360 = 26
Elephant	34	34 ÷ 70 x 360 = 175
Giraffe	21	21 ÷ 70 x 360 = 108
Rhino	2	2 ÷ 70 x 360 = 10
Total	70	