

Discussion Problems

Step 6: Pie Charts with Percentages

Teaching Note:

For optimal results, please print in colour or greyscale.

National Curriculum Objectives:

Mathematics Year 6: (6S1) [Interpret and construct pie charts and line graphs and use these to solve problems](#)

About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 6 Statistics](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

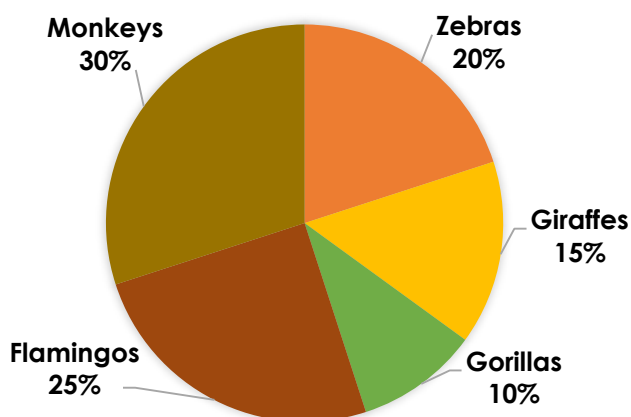
Pie Charts with Percentages

1. A safari park counted the total number of animals they had in 2018. They converted their data into a pie chart.

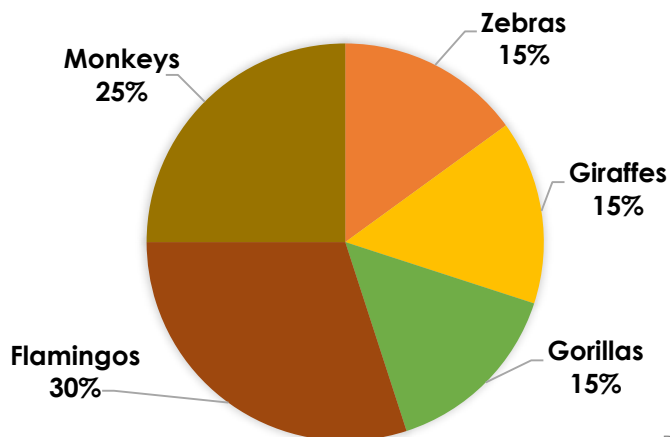
There were 18 gorillas in the safari park in 2018. Investigate how many of each type of animal there were in 2019.

The total number of animals stay the same each year.

Animals in 2018



Animals in 2019



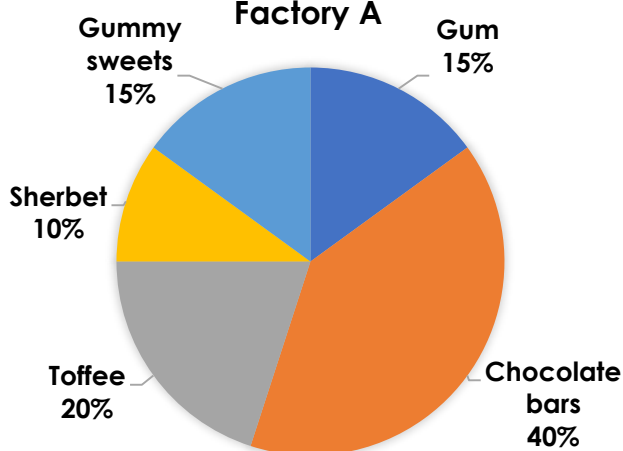
DP

2. Two factories produce different types of confectionery products. The quantity produced for each product is measured in kilograms.

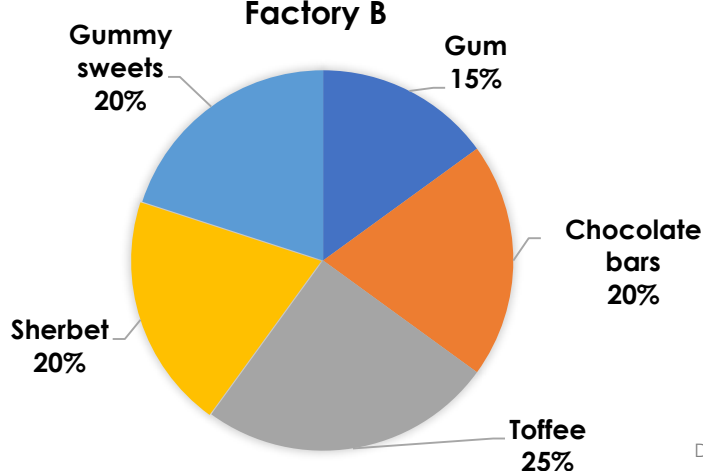
On one day, both factories produced the same quantity of chocolate bars which was between 50kg and 60kg.

Explore the quantity of the other products produced by each factory on that day.

Factory A



Factory B



DP

Pie Charts with Percentages

1. A safari park counted the total number of animals they had in 2018. They converted their data into a pie chart.

There were 18 gorillas in the safari park in 2018. Investigate how many of each type of animal there were in 2019.

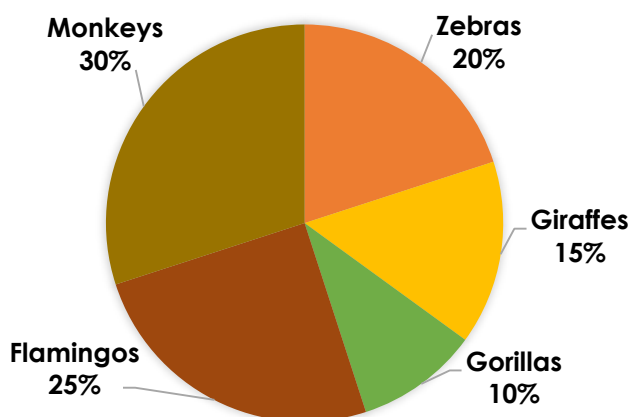
The total number of animals stay the same each year.

There are 180 animals in total.

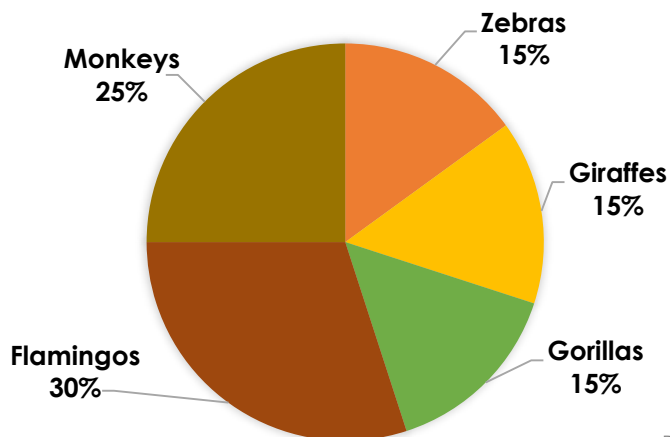
In 2018 there are 36 zebras, 27 giraffes, 18 gorillas, 45 flamingos and 54 monkeys.

In 2019 there are 27 zebras, 27 giraffes, 27 gorillas, 54 flamingos and 45 monkeys.

Animals in 2018



Animals in 2019



DP

2. Two factories produce different types of confectionery products. The quantity produced for each product is measured in kilograms. On one day, both factories produced the same quantity of chocolate bars which was between 50kg and 60kg.

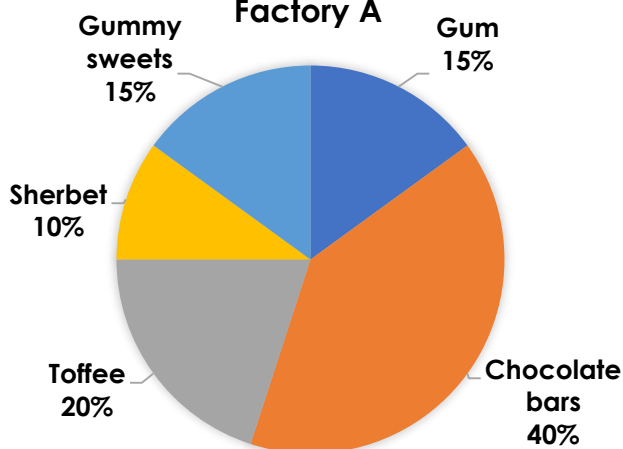
Explore the quantity of the other products produced by each factory on that day.

Various possible answers, for example:

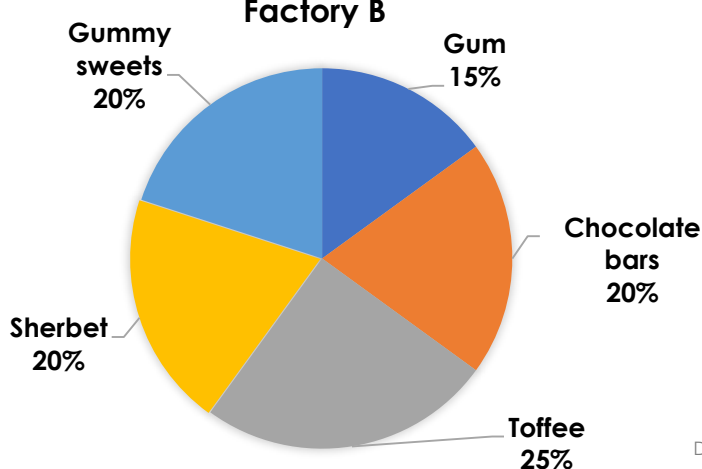
Factory A produced 21kg gum, 56kg chocolate bars, 28kg toffee, 14kg sherbet and 21kg gummy sweets. It produced 140kg of confectionery in total.

Factory B produced 42kg gum, 56kg chocolate bars, 70kg toffee, 56kg sherbet and 56kg gummy sweets. It produced 280kg of confectionery in total.

Factory A



Factory B



DP