

Discussion Problems

Step 7: Draw Pie Charts

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.

Draw Pie Charts

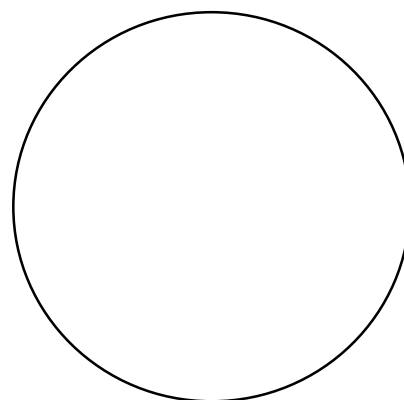
1. Princess Xena is trying to work out how many of each mythical creature there are within a dungeon. She knows that there are 20 Minotaurs and 120 creatures in total.

Using a protractor, draw a pie chart by investigating the number of the different types of creatures in the dungeon. Use the ratios and pie chart template below to help you.



Creature	Creature Ratio	Number
Yeti	Yeti:Goblin 1:5	
Goblin	Goblin:Griffin 5:1	
Griffin	Griffin:Pixies 1:11	
Pixies	Pixies:Centaur 11:2	
Centaur	Centaur:Yeti 2:1	

Percentage of Creatures
in the Dungeon



DP

2. Seventy-two children choose their favourite model of mobile phone.

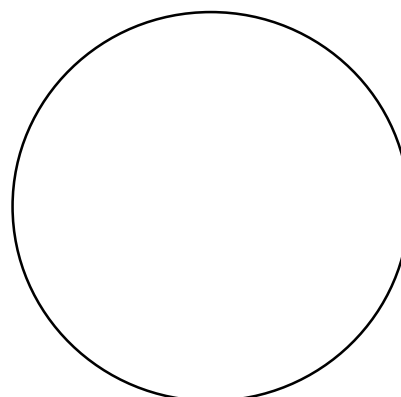
Using the table and pie chart template below to help you, explore different ways that the children could have voted and fill in the table below.

Convert this information into draw a pie chart.



Children's Favourite Model
of Mobile Phone

Phone Model	Rule	Number of votes	Degrees
ePhone	Multiple of 5		
Tomsung	Greater than 20		
Hawaii	Multiple of 4 and 6		
Phony	Prime number		
Hokia	Square number		
Other	Odd number		



DP

Draw Pie Charts

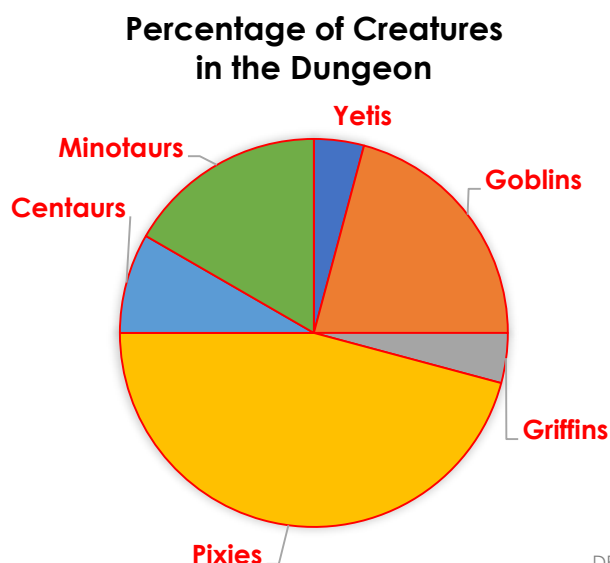
1. Princess Xena is trying to work out how many of each mythical creature there are within a dungeon. She knows that there are 20 Minotaurs and 120 creatures in total.

Using a protractor, draw a pie chart by investigating the number of the different types of creatures in the dungeon. Use the ratios and pie chart template below to help you.

Number of creatures as shown below. Various pie charts possible including:



Creature	Creature Ratio	Number
Yeti	Yeti:Goblin 1:5	5
Goblin	Goblin:Griffin 5:1	25
Griffin	Griffin:Pixies 1:11	5
Pixies	Pixies:Centaur 11:2	55
Centaur	Centaur:Yeti 2:1	10



2. Seventy-two children choose their favourite model of mobile phone.

Using the table and pie chart template below to help you, explore different ways that the children could have voted and fill in the table below.

Convert this information into draw a pie chart.

Various answers and pie charts possible including:



Phone Model	Rule	Number of votes	Degrees
ePhone	Multiple of 5	5	25°
Tomsung	Greater than 20	26	130°
Hawaii	Multiple of 4 and 6	12	60°
Phony	Prime number	13	65°
Hokia	Square number	9	45°
Other	Odd number	7	35°

