lora and fauna proportion problems

Recognise and solve proportion problems

You will need:
• calculator

1 A survey of British amphibians gave the results shown in the table. Calculate the proportion of each amphibian as a percentage.

Amphibian	Frog	Common Toad	Natterjack toad	Great-crested newt
Number seen	25	12	8	5

2 A conservation group raised funds to plant some native British deciduous trees. They purchased and planted 60 trees in total, a mixture of oak, ash and beech.

The proportion of oak trees is 50%, the proportion of ash trees is 20% and the proportion of beech trees is 30%.

Calculate the number of each species of tree.

1 A survey of woodland animals gave the results shown in the table. Calculate the proportion of each animal as a percentage.

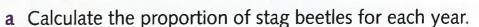| Animal	Badger	Fox	Hedgehog	Rabbit	Squirrel
Number seen	33	55	44	77	66

2 A conservation group raised funds to plant some native British evergreen trees. They purchased and planted a mixture of yew, Scots pine and holly.

In every 5 trees, 0.2 are yew, 0.4 are Scots pine and the remainder are holly.

There are 44 holly trees.

a Calculate the number of yew and Scots pines.

b What is the total number of trees?

3 A survey of reptiles gave the results shown in the table. Calculate the proportion of each animal as a decimal and as a percentage.
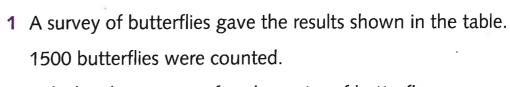
British reptiles	Common lizard	Slow worm	Adder	Grass snake	Smooth snake
Number seen	81	69	39	51	60

4 A keen entomologist has been keeping a record of the large beetles observed in his local area for five years. He thought that the proportion of stag beetles was increasing.

Year	Total number of large beetles seen	Number of stag beetle sightings
2010	1200	18
2011	1400	21
2012	800	16
2013	1400	28
2014	1000	25

a Calculate the proportion of stag beetles for each year.

b Is the proportion of stag beetles increasing?

Challenge 3

1 A survey of butterflies gave the results shown in the table.

1500 butterflies were counted.

Calculate how many of each species of butterfly was seen.

Butterflies	Tortoiseshell	Common blue	Red admiral	Brimstone	Peacock
Percentage seen	24%	18%	26%	14%	18%

2 A conservation group raised funds to plant some native British hedges. They purchased and planted a 200 metre hedge comprising a mixture of hawthorn, hazel and holly. There are 3 hedge plants per metre.

11 in every 20 hedge plants are hawthorn, 25% are hazel and the rest are holly.

Calculate the total number of hedge plants and the number of each species.