Problem of the Week: Week 7 (Sum2): Year 9: Statistics
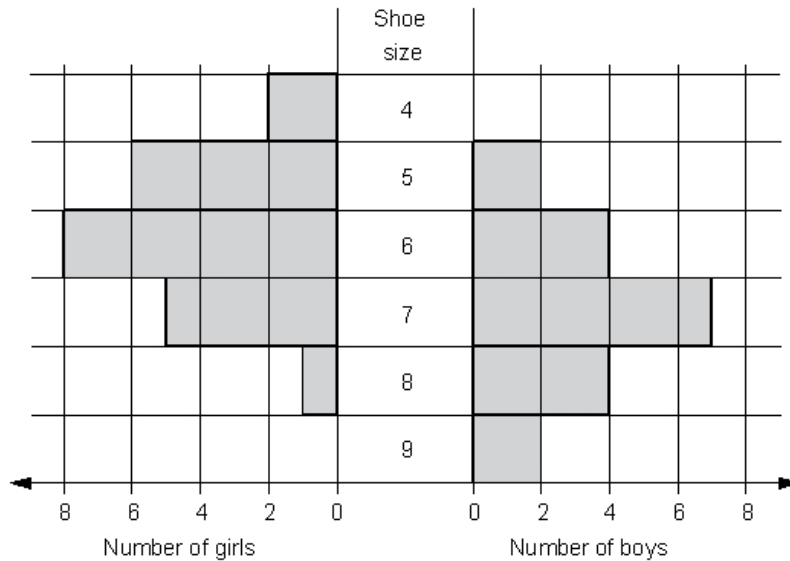
- Construct and interpret tables, charts and diagrams including stem and leaf diagrams and frequency tables

Shoe Sizes

Kim asked some pupils:

To the nearest whole number, what is your shoe size?

The chart shows her results.

a) How many pupils had size 6 shoes?
b) Kim asked more girls than boys. How many more?
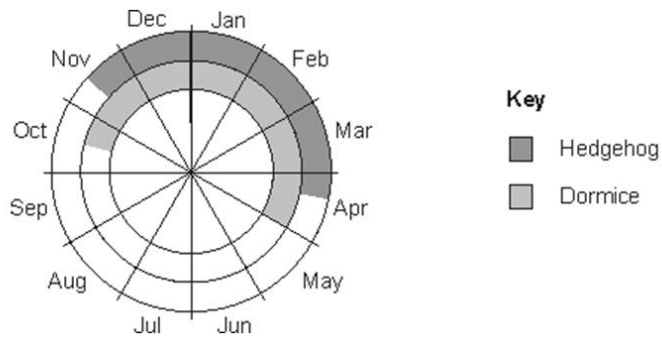c) Who had the bigger range of shoe sizes? (Girls/Boys/Both the same). Explain your answer.

Testbase

Solution

a) 12   (8 from the girls and 4 from the boys)
b) 3   (total the girls: 1+5+8+6+2= 22, total boys: 2+4+7+4+2=19)
c) Both the same, they both have a range of 4   (Girls 8 – 4 = 4, Boys 9 – 5 = 4)

Hibernation

Hedgehogs and dormice are small animals that sleep through the winter.

The shaded parts of the chart show when they sleep.

Use the chart to answer these questions:

a) Hedgehogs go to sleep in the middle of November. For how many months do they sleep?

b) Look at this statement:

Dormice sleep for **more than half of the year**

Is this statement true? Explain your answer.

Testbase

Solution

a) 5   (half of November + December + January + February + March + half of April)

b) Yes, they sleep for about 6 ½ months

Ages

Here is the data for the ages of people in a local coffee shop:

Ages of customers
25, 29, 45, 19, 36, 17, 60, 51, 39, 24, 15, 13, 31, 18, 24, 32
37, 27, 23, 53, 41, 34, 29, 28, 52, 17, 55, 47, 34, 28, 22, 20
64, 39, 38, 33, 24, 16, 27, 19, 26, 27, 25, 32, 26, 48, 54, 35

Construct a grouped frequency table and then graph the given data. Explain what this tells you about the coffee shop customers.
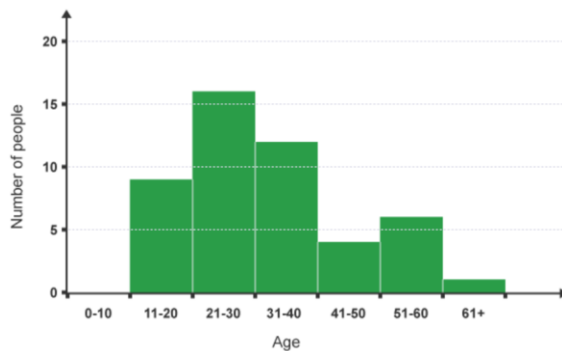
Age	Tally	Number of People

BBC Bitesize

Possible Solution

Age	Tally	Number of People
11 – 20	IIII IIII	9
21 – 30	IIII IIII IIII I	16
31 – 40	IIII IIII II	12
41 – 50	IIII	4
51 – 60	IIII I	6
61 - 70	I	1

Frequency chart showing the ages of the customers:

This chart shows that the modal group (average age using mode) of the customers was 21-30.