

Beyond Interactive Resources Guide

Hello to all our users!

In response to the challenges presented by the ongoing Coronavirus situation, the Beyond team have made it their top priority to ensure that you and your children are catered to for your home-based educational needs. As such, we have decided to introduce **Interactive Resources** that can be completed using free-to-download PDF reading software, on a home PC/Laptop or Android/IOS smart device, sparing you the need to print where possible. By following the guidance below, we hope to offer you a smooth, stress-free means of continuing your children's education from the comfort of your home.

Step 1: Download [here](#) for PC/Mac (or search 'Adobe Acrobat Reader' on Google Play or the App Store).

Follow the link above to open the download page for the PC/Mac version of Adobe Acrobat Reader. Click 'Download Acrobat Reader' at the bottom of the middle column - this will take you to a download page where your download will begin. Open the downloaded file and Acrobat Reader will install automatically (check the 'Launch Adobe Acrobat Reader DC' checkbox before clicking 'Finish' if you would like to open the program straight away).

Step 2: Download one of our interactive resources, and open using Adobe Acrobat Reader DC.

If you are a PC/Mac user and your downloaded PDF resource does not open using Acrobat Reader by default, simply right-click your PDF file, go to 'Open with' and select Adobe Acrobat Reader DC from the drop-down list.

For smart device users, open the Adobe Acrobat Reader app, press 'Files' at the bottom of the homescreen, then press 'On this device' and select the PDF you wish to open.

Step 3: Complete the resource!

For PC/Mac users: To fill in the resource, click the text fields and type your answers as needed. Check boxes and radio buttons can simply be clicked on to make the selection of your choice. When you are finished with the resource, go to File > Save As... and save your file where you like (we recommend you do not save over the original PDF, as you may wish to use it again without first having to remove all the answers!)

For smart device users: To fill in the resource, press the text fields and type your answers as needed. Check boxes and radio buttons can simply be clicked on to make the selection of your choice. When you are finished, simply press the back button in the top left of the appscreen and your PDF will save automatically (this will overwrite the original file, so you may wish to create a copy if you would like to use the resource again in future without first having to remove all the answers!)

Step 4: Rinse and repeat!

We hope you have found this information useful. If you experience any problems in getting the above method to work, please do contact the Beyond team at _____ and we will endeavour to do what we can to assist you.

Tally Charts, Bar Charts and Pictograms

Answers

1. Complete the tally chart below to show the number of triangles, squares, circles and hexagons shown.



Shape	Tally	Frequency
Triangle		7
Square		5
Circle		2
Hexagon		6
Total	20	20

2. A school uses a tally chart to record how many pupils are late each day. Complete the tally chart.

Day	Tally	Frequency
Monday		3
Tuesday		6
Wednesday		5
Thursday		10
Friday		12
Saturday		3
Sunday		1
Total	40	40

3. Blake rolls a dice 30 times and records the scores.

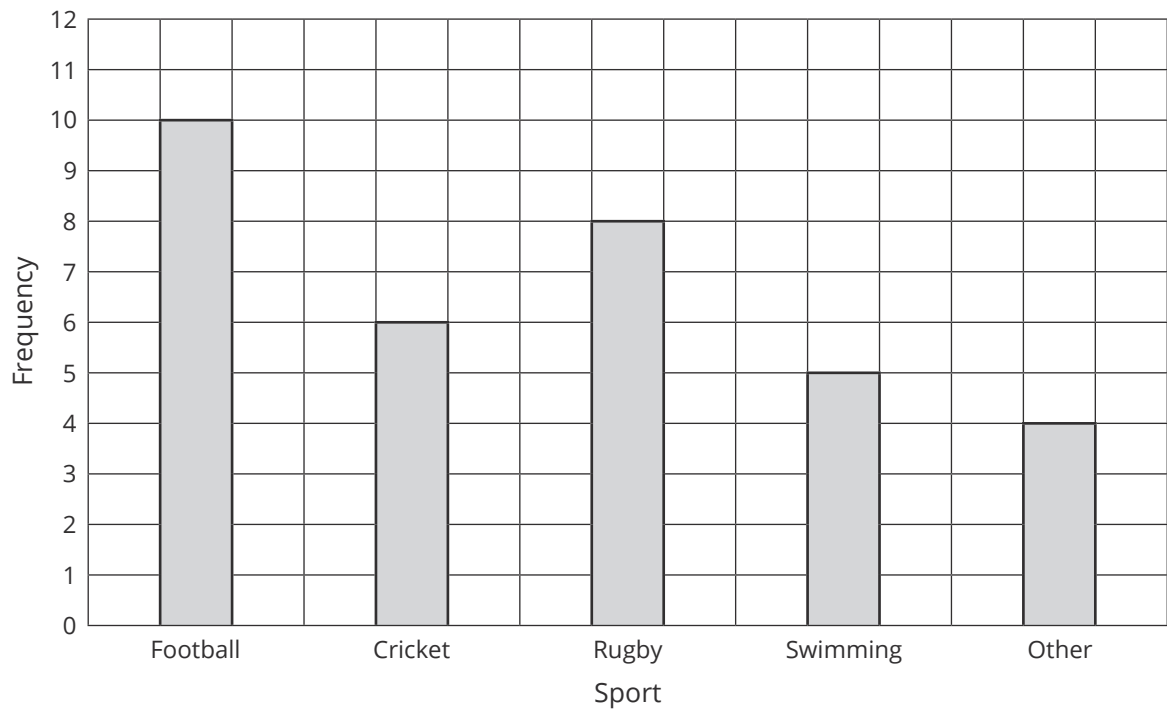
Draw a tally chart to show their results.

6, 4, 2, 1, 1, 3, 4, 5, 4, 1, 1, 5, 4, 3, 2, 2, 6, 1, 3, 6, 5, 4, 3, 2, 1, 5, 3, 4, 6, 5

Number	Tally	Frequency
1		6
2		4
3		5
4		6
5		5
6		4
Total	30	30

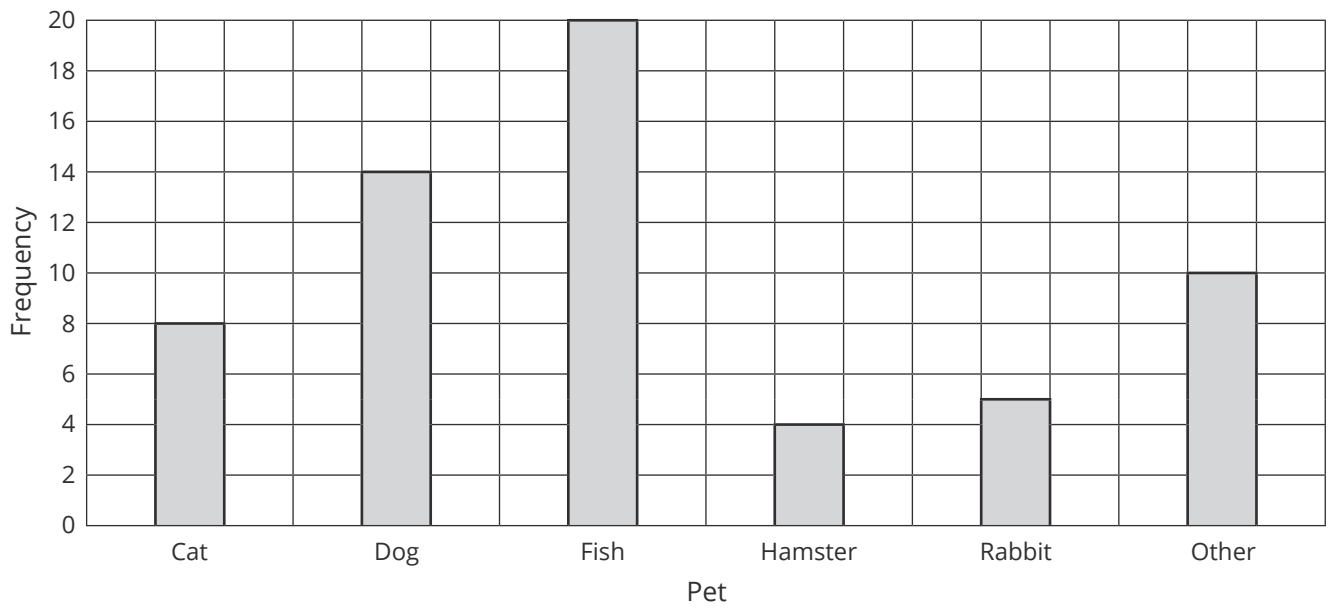
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Sport	Frequency
Football	10
Cricket	6
Rugby	8
Swimming	5
Other	4



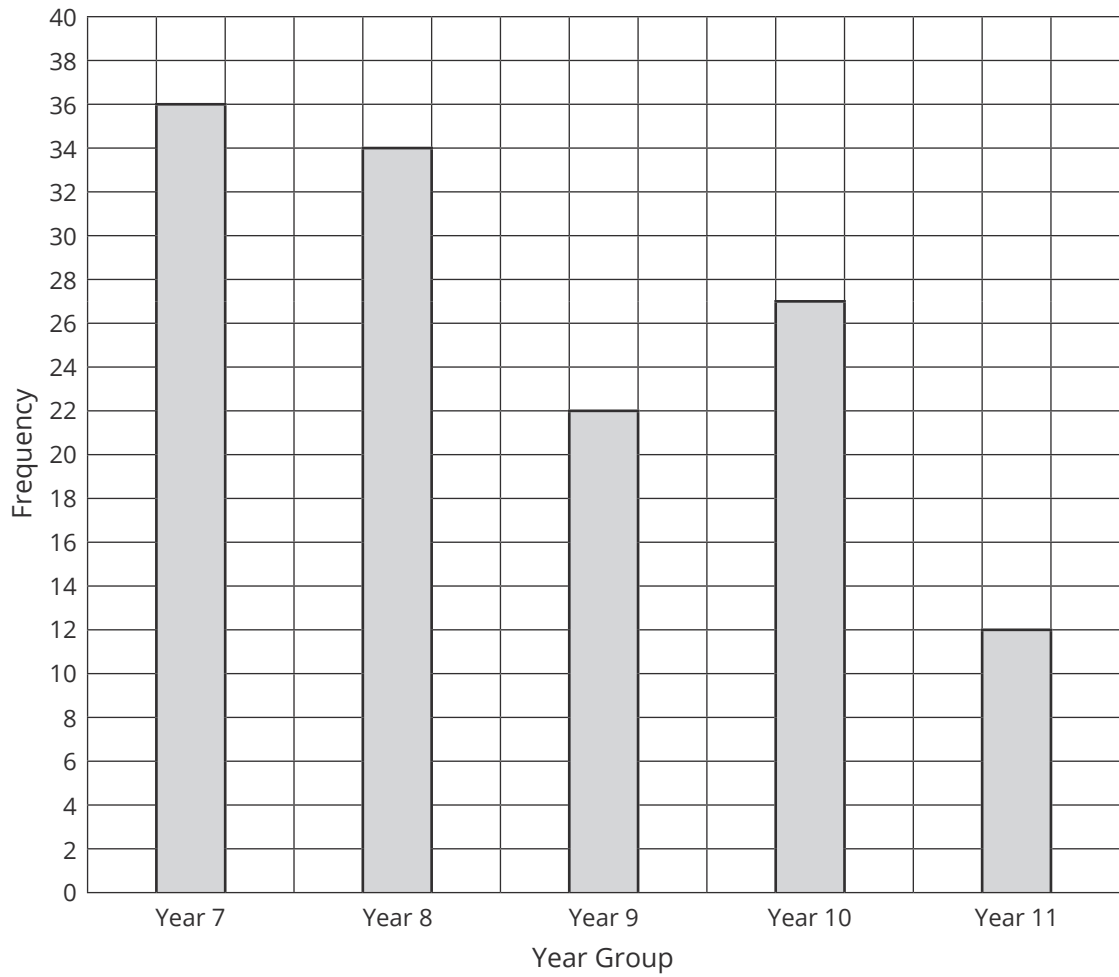
5. Hasaan does a survey of the pets his friends have. Complete the bar chart to show his results.

Pet	Frequency
Cat	8
Dog	14
Fish	20
Hamster	4
Rabbit	5
Other	10



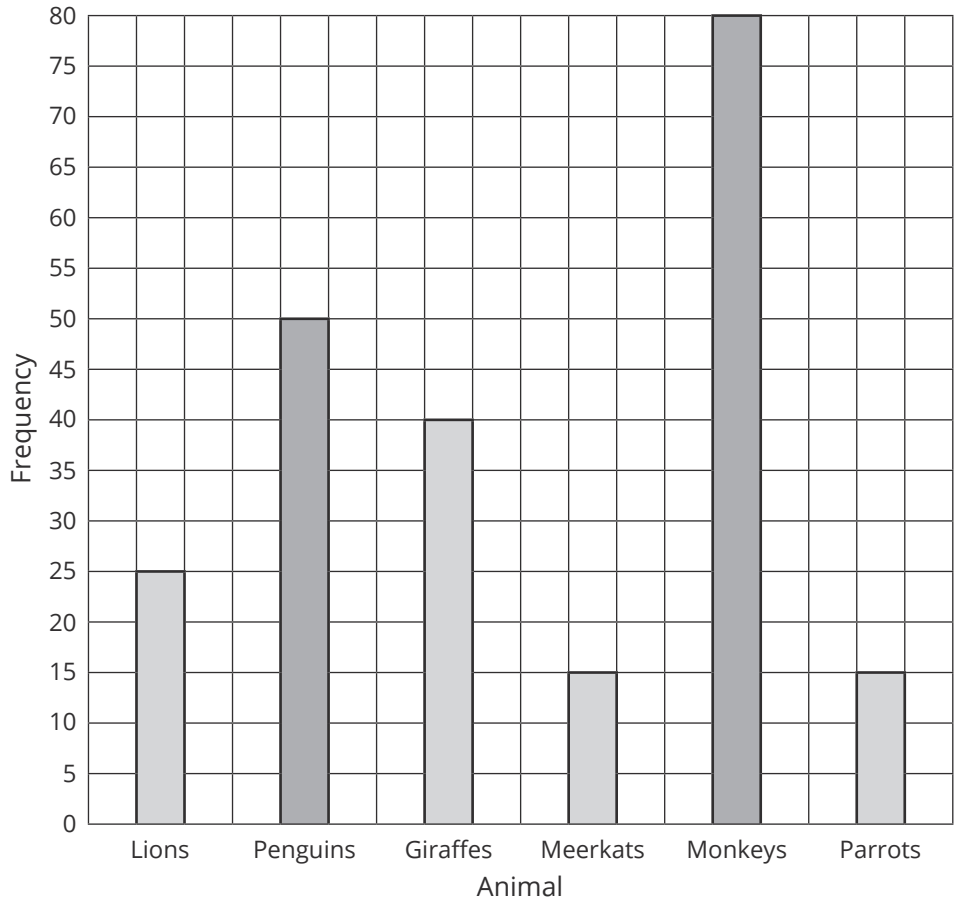
6. A school records the number of merit points awarded to pupils in each year group. Complete the bar chart to show the results.

Year Group	Students
Year 7	36
Year 8	34
Year 9	22
Year 10	27
Year 11	12



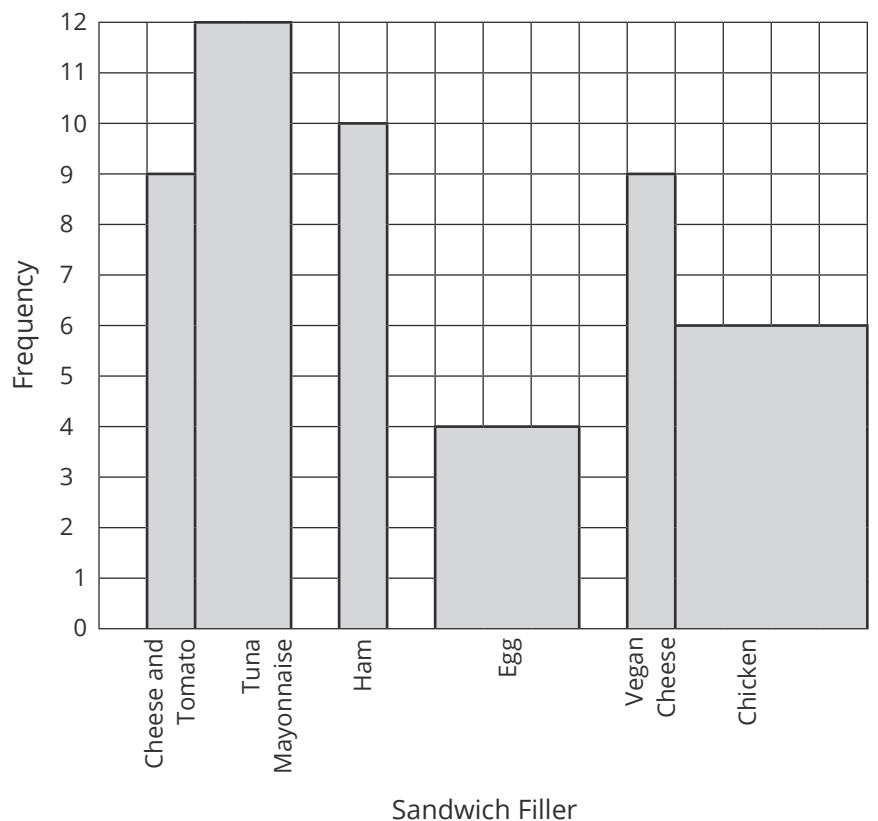
7. A zoo records information about the average number of visitors to certain animals each hour. Complete the bar chart and the table to represent this information.

Animal	Frequency
Lions	25
Penguins	50
Giraffes	40
Meerkats	15
Monkeys	$225 - (25 + 50 + 40 + 15 + 15) = 80$
Parrots	15
Total	225



8. Shelley has drawn a bar chart to show the different fillings of sandwiches sold at a café during lunchtime.

Sandwich Filler	Frequency
Cheese and Tomato	8
Tuna Mayonaise	12
Ham	10
Egg	4
Vegan Cheese	9
Chicken	6



Explain **three** mistakes Shelley has made when drawing the bar chart.

- **Incorrect bar heights for cheese and tomato.**
- **Not all bars have spaces between them.**
- **Bars do not have equal width.**

9. Rosie is revising for an exam. The pictogram shows how many hours she spent revising over five days.

Key: ○ represents 2 hours

Monday	○
Tuesday	○
Wednesday	○ ○
Thursday	○ ◐
Friday	◐

a. How many hours did Rosie spend revising on Tuesday?

2

b. On which day did Rosie spend 4 hours revising?

Wednesday

c. How many hours did Rosie spend revising in total?

12 hours

10. The pictogram shows some information about the money each year group raised in a recent cake sale.

Key: ○ represents £5

Year 7	○ ○ $\frac{1}{4}$ ○
Year 8	○ ○
Year 9	○ $\frac{1}{2}$ ○
Year 10	○ $\frac{3}{4}$ ○
Year 11	○ ○ ○ $\frac{1}{4}$ ○

a. How much money did year 10 raise?

$$5 + 3.75 = \text{£}8.75$$

b. How much more money did year 8 raise compared to year 9?

$$10 - 7.5 = \text{£}2.50$$

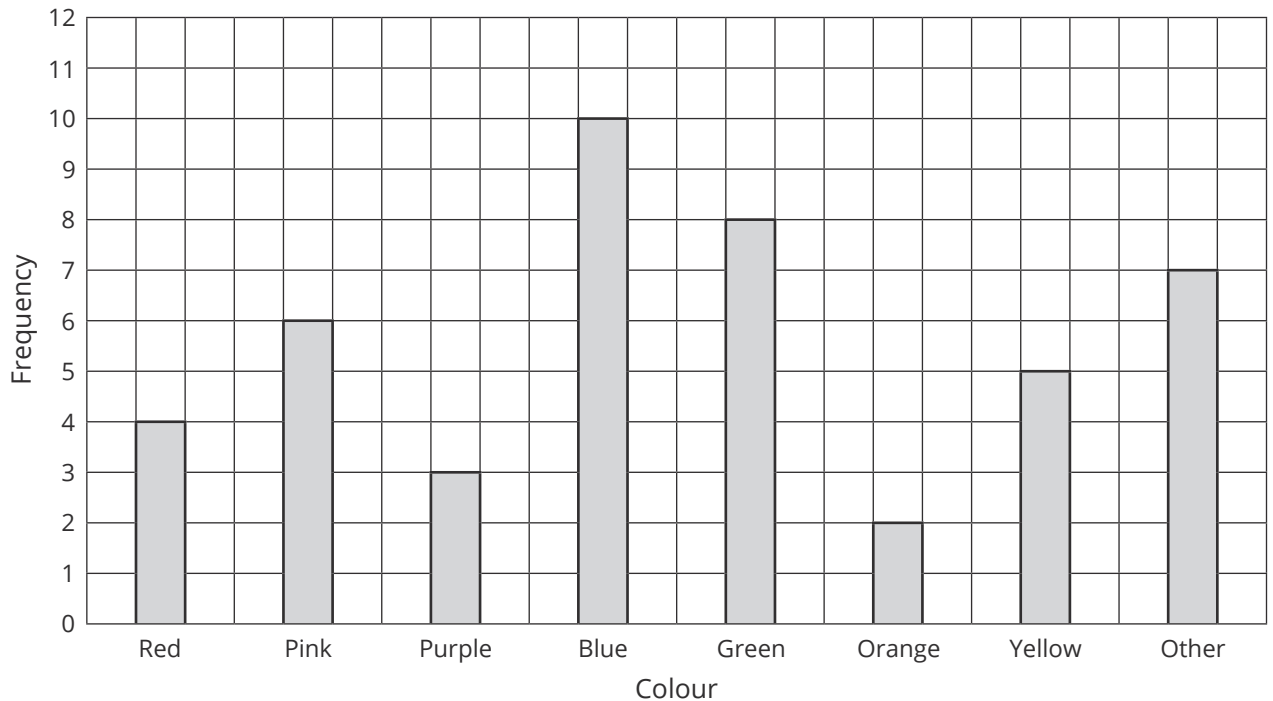
c. In total, £56.25 was raised between all the year groups. Use this information to complete the pictogram.

$$(5 + 5 + 3.75) + (5 + 5) + (5 + 2.50) + (5 + 3.75) = \text{£}40$$

$$56.25 - 40 = \text{£}16.25$$

Challenge

The bar chart shows a group of students' favourite colour. Draw a pictogram to represent the information shown in the bar chart. The pictogram should **not** use a key of value 1.



A suitable pictogram drawn which includes a key and the following values:

Red = 4

Pink = 6

Purple = 3

Blue = 10

Green = 8

Orange = 2

Yellow = 5

Other = 7

Tally Charts, Bar Charts and Pictograms

Prior Knowledge:

- How to find fractions of amounts.
- This sheet is best used as revision of tally charts, bar charts and pictograms.

Tally Charts

A tally chart uses marks to represent frequencies (frequency is the number of times something happens). They are 'bunched' in fives to make them easier to count.

Each | represents one. Each time your frequency goes up by 1, add another line to the right of the previous line. The fifth line goes across the previous 4 lines, to make a group. This means |||| represents five.

Tallying 6:

	1
	2
	3
	4
	5
	6

Example

A group of students were asked their favourite type of biscuit. The results are recorded in a tally chart. Complete the table and calculate the total number of students asked.

Biscuit	Tally	Frequency
Chocolate Digestive		5
Rich Tea		
Custard Cream		1
Chocolate Chip Cookie		
Other		11
Total		

Tally for custard cream biscuits:

1 is represented by a single line, |

Frequency of rich tea biscuits:

||||| || is $5 + 2 = 7$

Biscuit	Tally	Frequency
Chocolate Digestive		5
Rich Tea		7
Custard Cream		1
Chocolate Chip Cookie		6
Other		11
Total	30	30

Tally for other:

11 is the same as $5 + 5 + 1$, so it is represented by ||||| ||||| |

Total number of students asked:

$$5 + 7 + 1 + 6 + 11 = 30$$

Frequency of chocolate chip cookies:

$$\text{||||| |} \text{ is } 5 + 1 = 6$$

By completing the table, we can see that **30** students were asked their favourite type of biscuit.

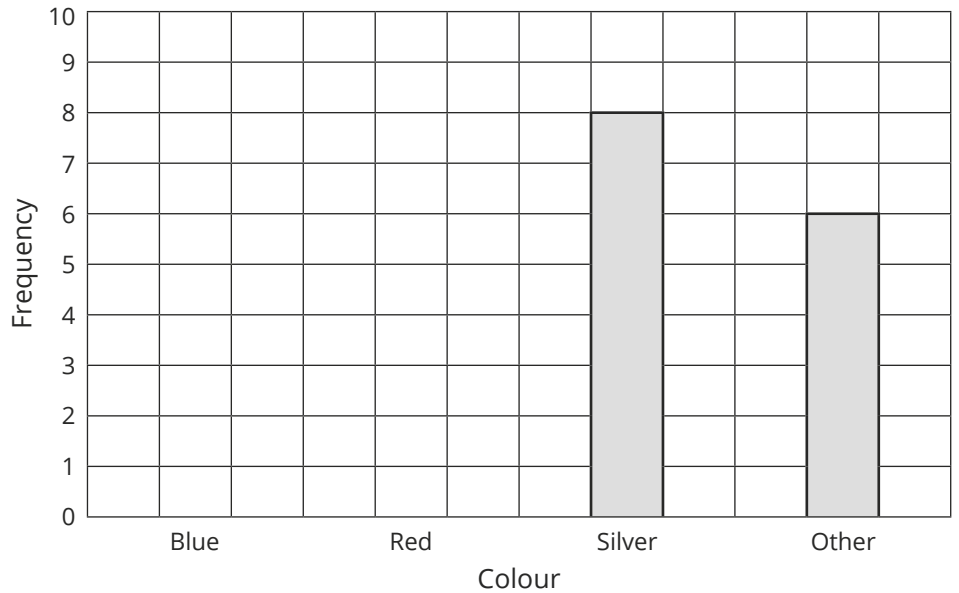
Bar Charts

A bar chart uses the height of the bars to represent the frequency.

Example

The bar chart gives information about the colour of cars in a car park. Complete the bar chart and the table to represent this information.

Colour	Frequency
Blue	7
Red	
Silver	
Other	
Total	30



1. Read across from the height of the bars to fill in the missing frequencies.

Silver: 8

Other: 6

Colour	Frequency
Blue	7
Red	
Silver	8
Other	6
Total	30

2. There isn't a bar for red cars, but we can calculate the total of all the other colours and take that from 30.

$$7 + 8 + 6 = 21$$

$$30 - 21 = \mathbf{9}$$

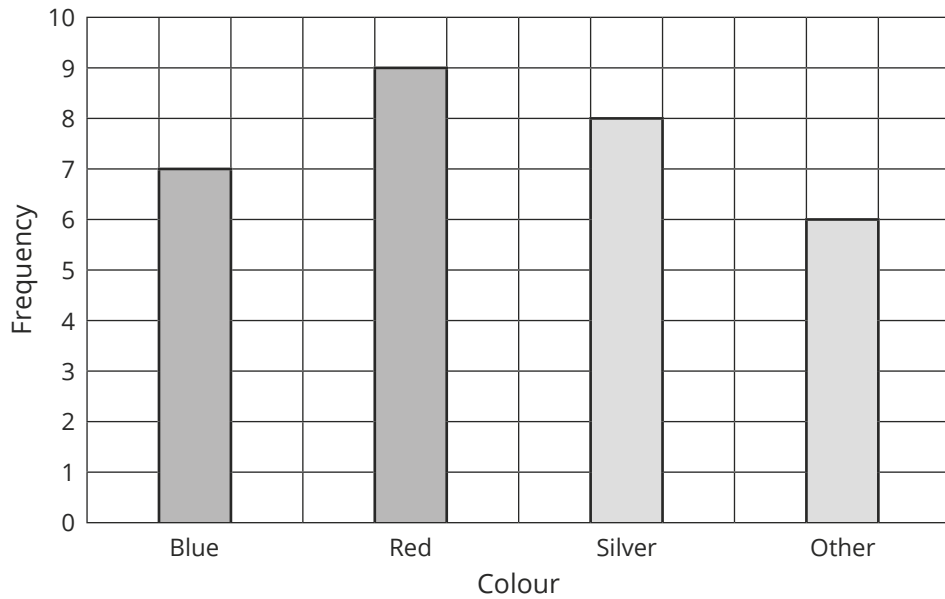
Colour	Frequency
Blue	7
Red	9
Silver	8
Other	6
Total	30

3. Now, complete the rest of the bar chart.

The bar for blue cars should be level with 7 and the bar from red cars should be level with 9.

Top Tips

- Draw any missing bars using a pencil and a ruler.
- All bars should have the **same width**.
- There should be **equal** gaps between all of the bars. Without the gaps, it is not a bar chart.



Pictograms


A pictogram uses an icon, picture or symbol to represent a frequency. To make sense, a pictogram must always have a key, which tells you how much each picture is worth.

In a pictogram, it is important to make sure that each picture is the same size and equally spaced out.


Example



A group of schools hold a year nine football tournament. The total goals scored in the competition are represented in the pictogram. Complete the table to see how many goals were scored in the tournament.

The key will help you work out how many goals each picture represents.

Key:  = 4 goals scored





If you see a part of a picture, you need to calculate its value. For example.

 = $\frac{3}{4}$ of the value. $\frac{3}{4}$ of 4 = 3 goals scored.

Team	Goals Scored	Frequency
St. George's		8
King Ethelbert		
CCHS		
Dane Court		5
Total		

Tally Charts, Bar Charts and Pictograms

Each football is worth 4 goals, so 8 goals are worth 2 footballs.

Team	Goals Scored	Frequency
St. George's		8
King Ethelbert		10
CCHS		7
Dane Court		5
Total	30	30

2 footballs are worth:

$$4 \times 2 = 8 \text{ goals.}$$

Half a football is worth:

$$4 \div 2 = 2 \text{ goals.}$$

$$8 + 2 = 10 \text{ goals.}$$

You need to represent 5 goals. 4 goals is 1 football. 1 is a quarter of 4, so you need to draw one football and a quarter football.

1 football is worth 4 goals. 3 is $\frac{3}{4}$ of 4, so $\frac{3}{4}$ of a football is worth 3 goals. $3 + 4 = 7$ goals.

$$8 + 10 + 7 + 5 = 30 \text{ goals}$$

Your Turn

- Complete the tally chart below to show the number of triangles, squares, circles and hexagons shown.



Shape	Tally	Frequency
Triangle		
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Hexagon		
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- A school uses a tally chart to record how many pupils are late each day. Complete the tally chart.

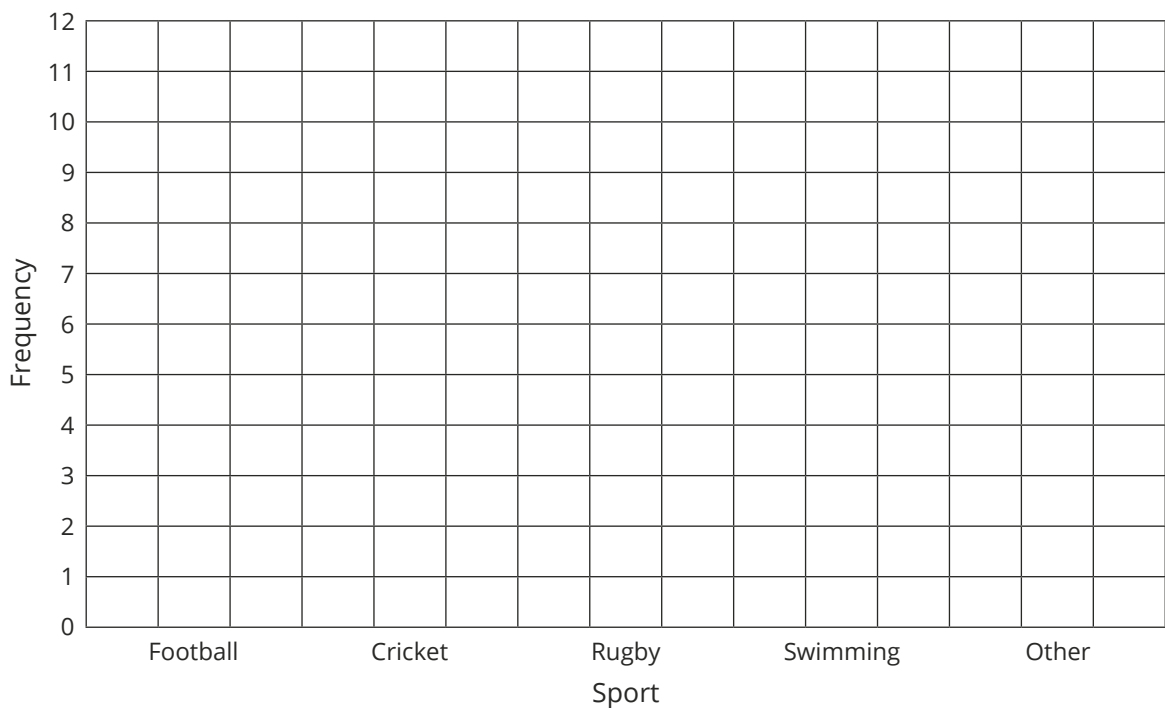
Day	Tally	Frequency
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Tuesday		6
Wednesday		
Thursday		10
Friday		12
Saturday		3
Sunday		
Total	40	40

3. Blake rolls a dice 30 times and records the scores.
 Draw a tally chart to show their results.

6, 4, 2, 1, 1, 3, 4, 5, 4, 1, 1, 5, 4, 3, 2, 2, 6, 1, 3, 6, 5, 4, 3, 2, 1, 5, 3, 4, 6, 5

4. Josh does a survey of favourite sports in his class. Complete the bar chart to represent his results.

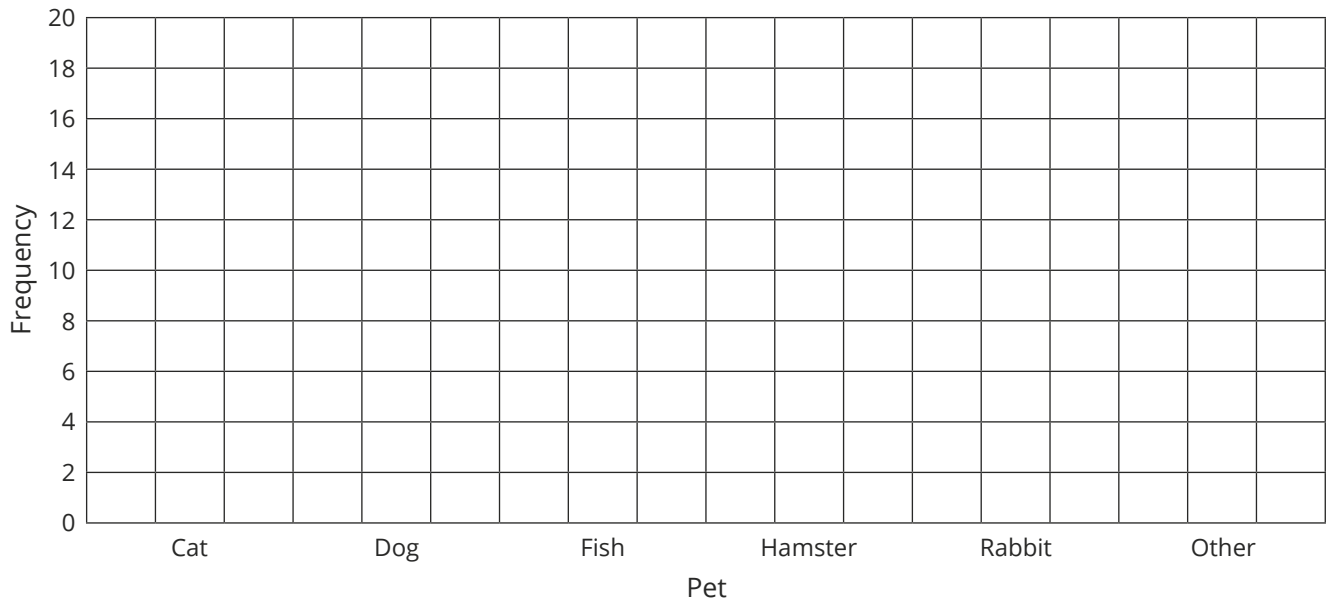
Sport	Frequency
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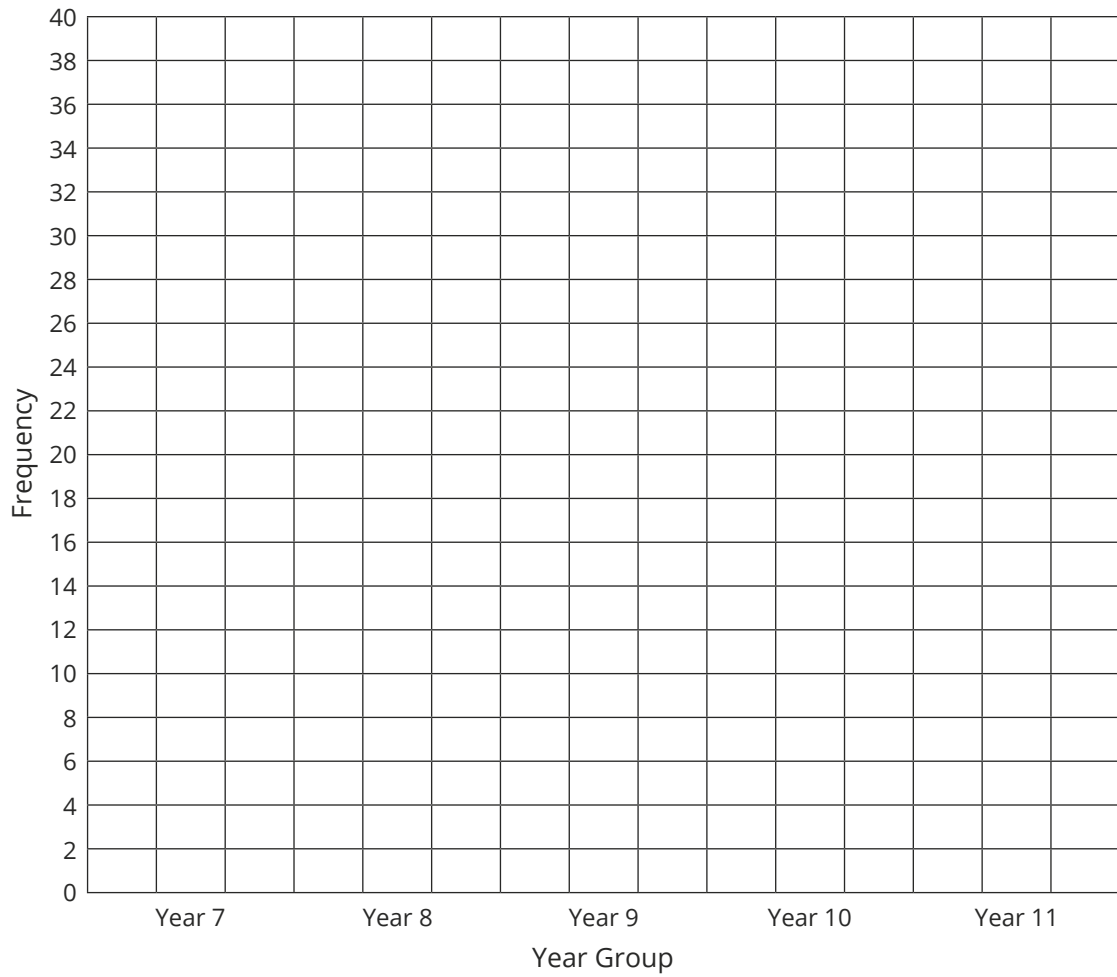
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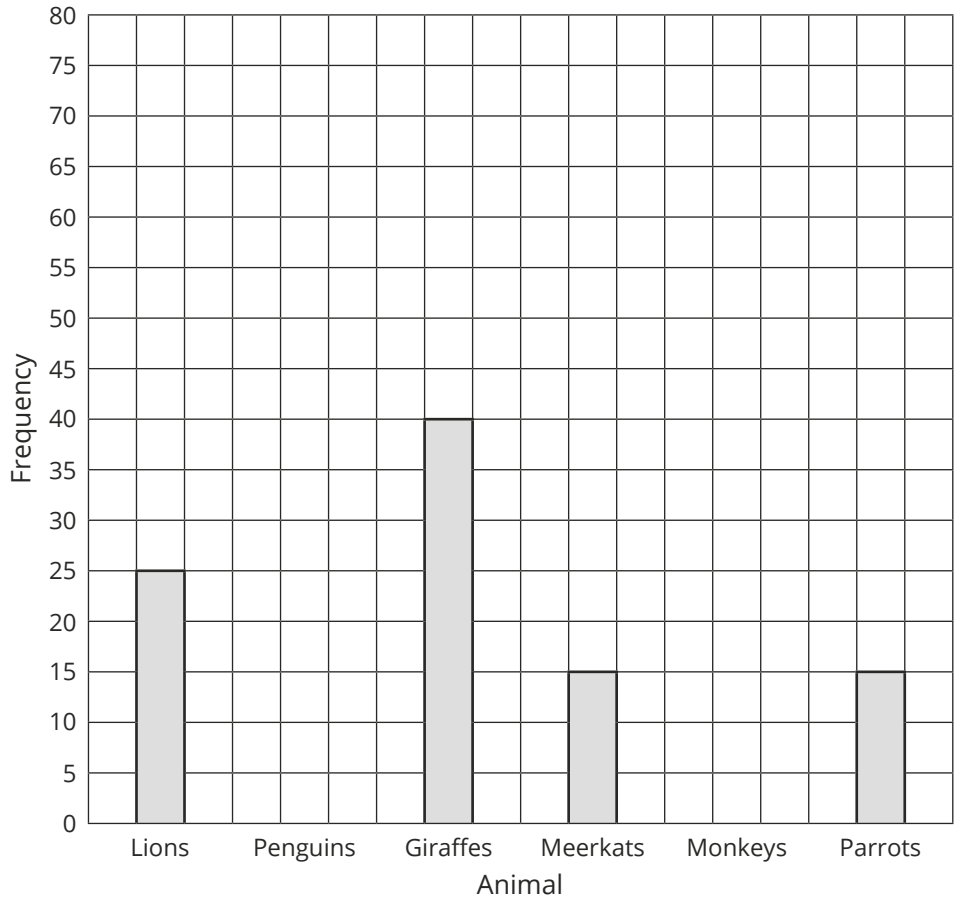
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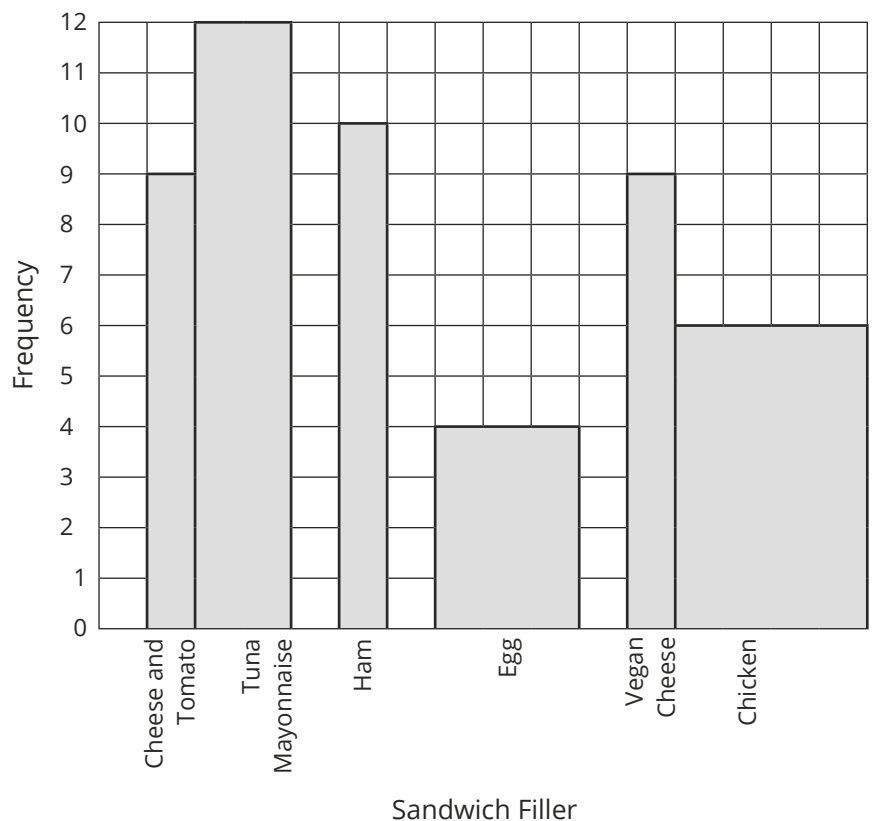
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Monkeys	
Parrots	
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Sandwich Filler	Frequency
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Explain **three** mistakes Shelley has made when drawing the bar chart.

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Key: ○ represents 2 hours

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a. How many hours did Rosie spend revising on Tuesday?

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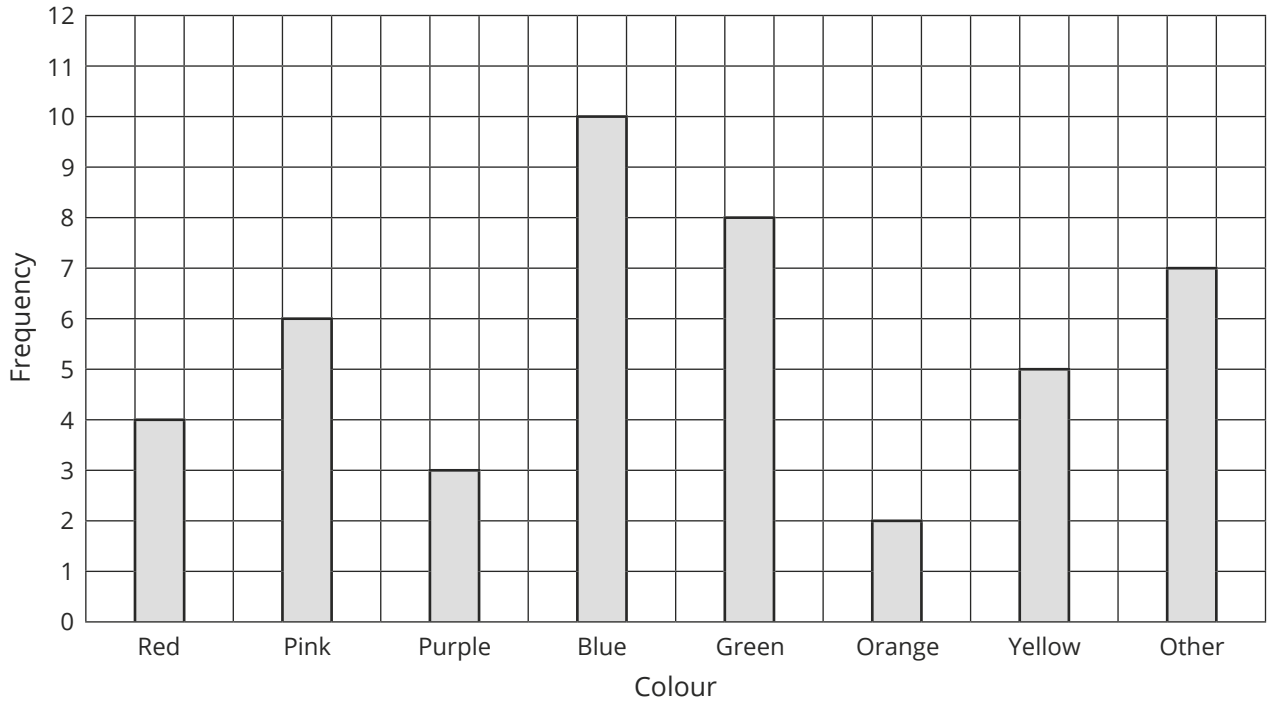
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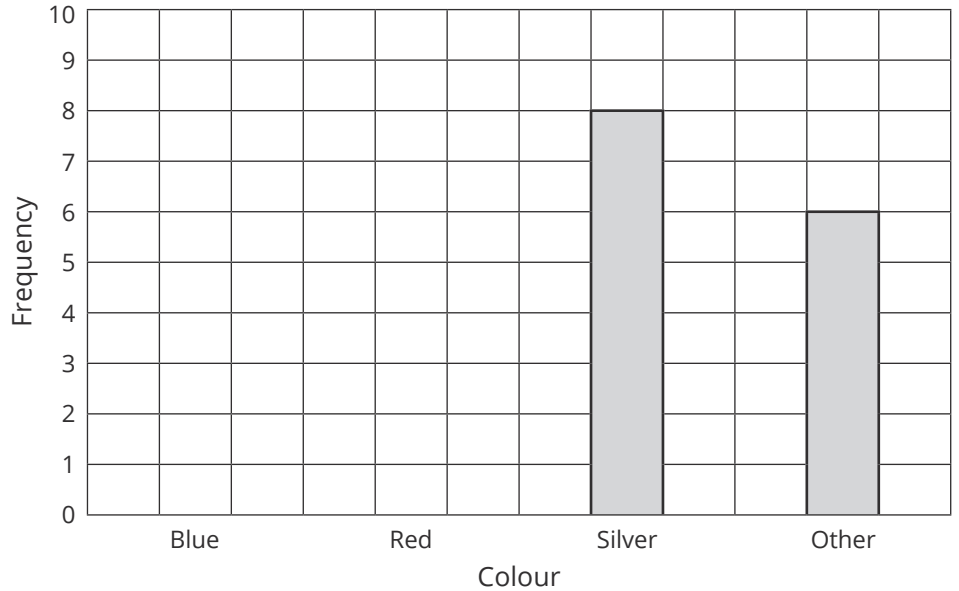
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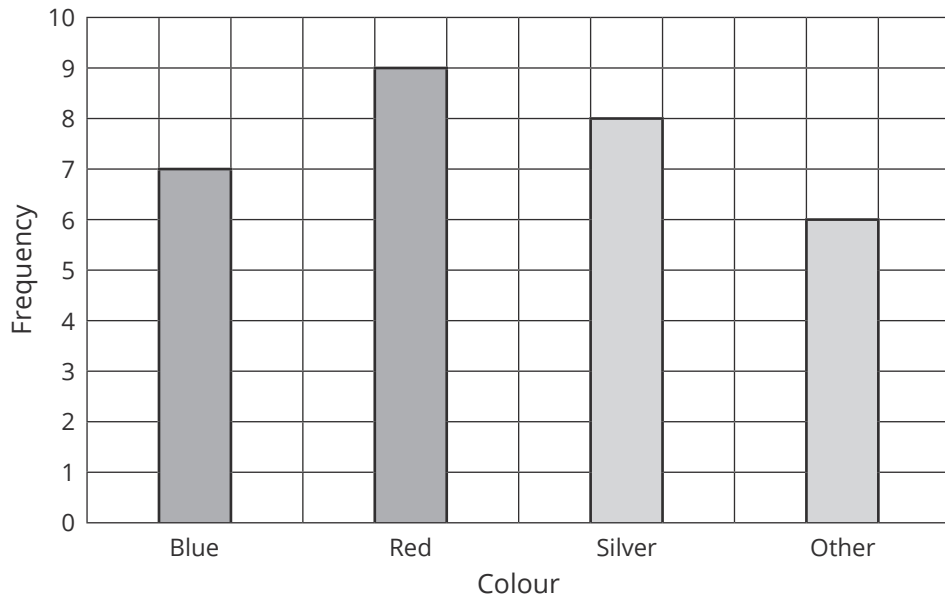
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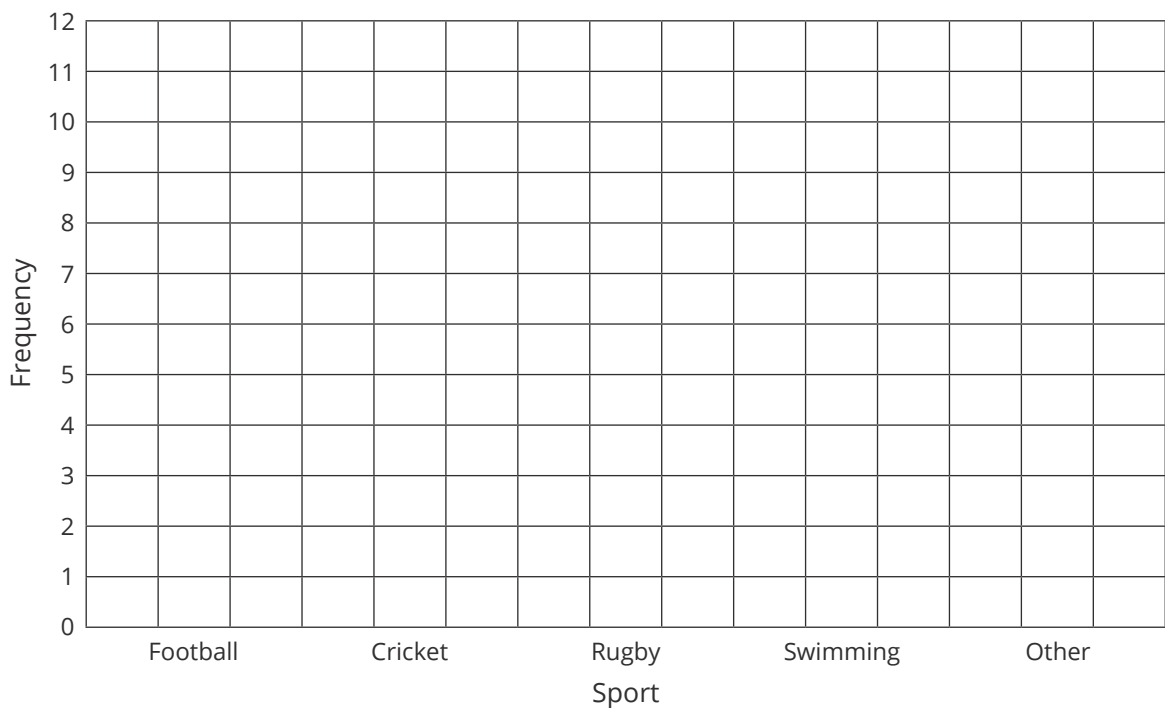
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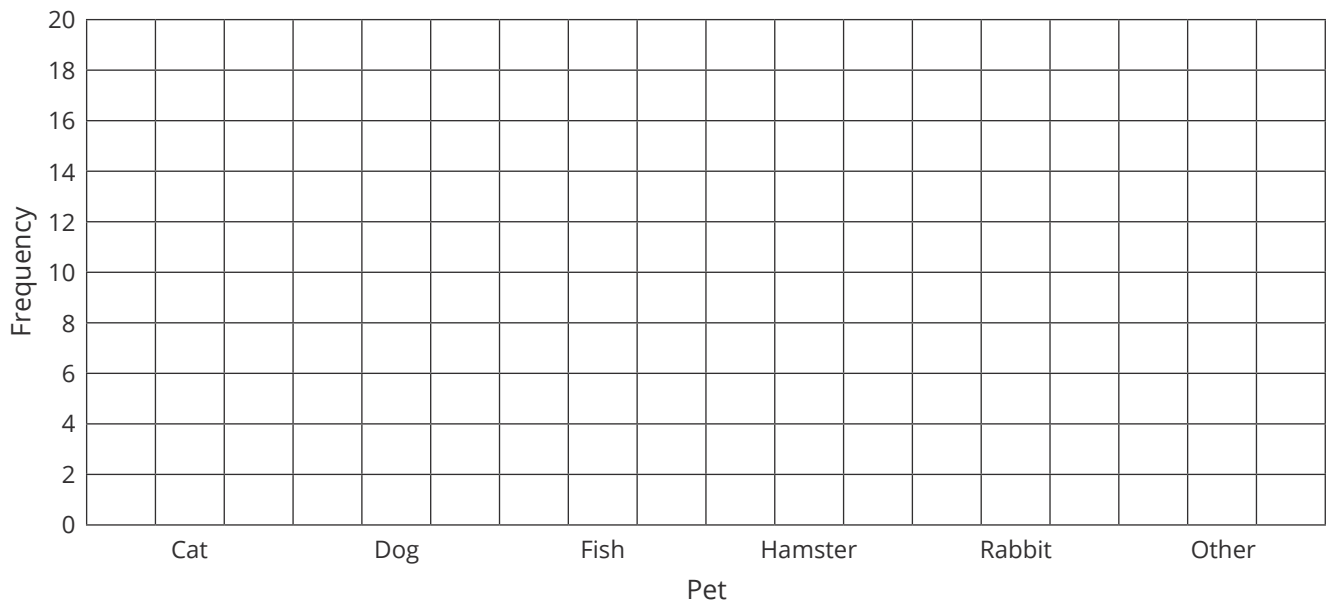
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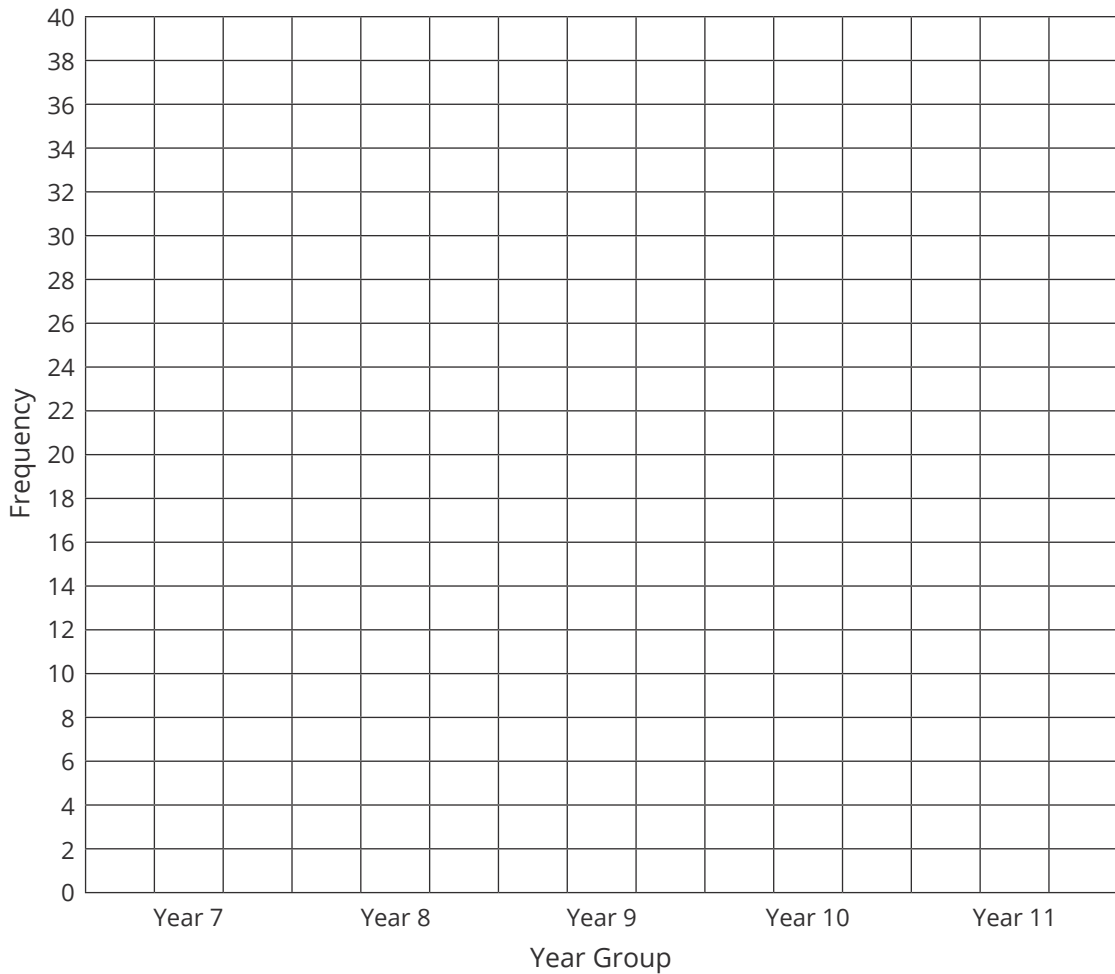
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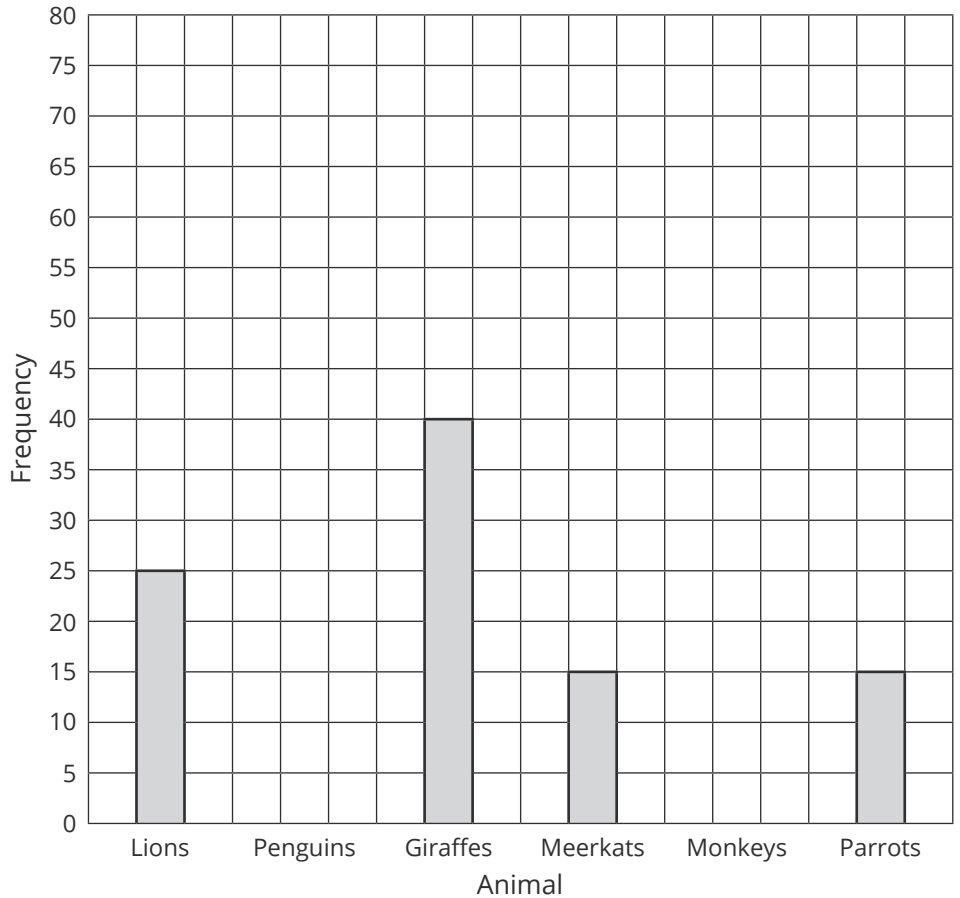
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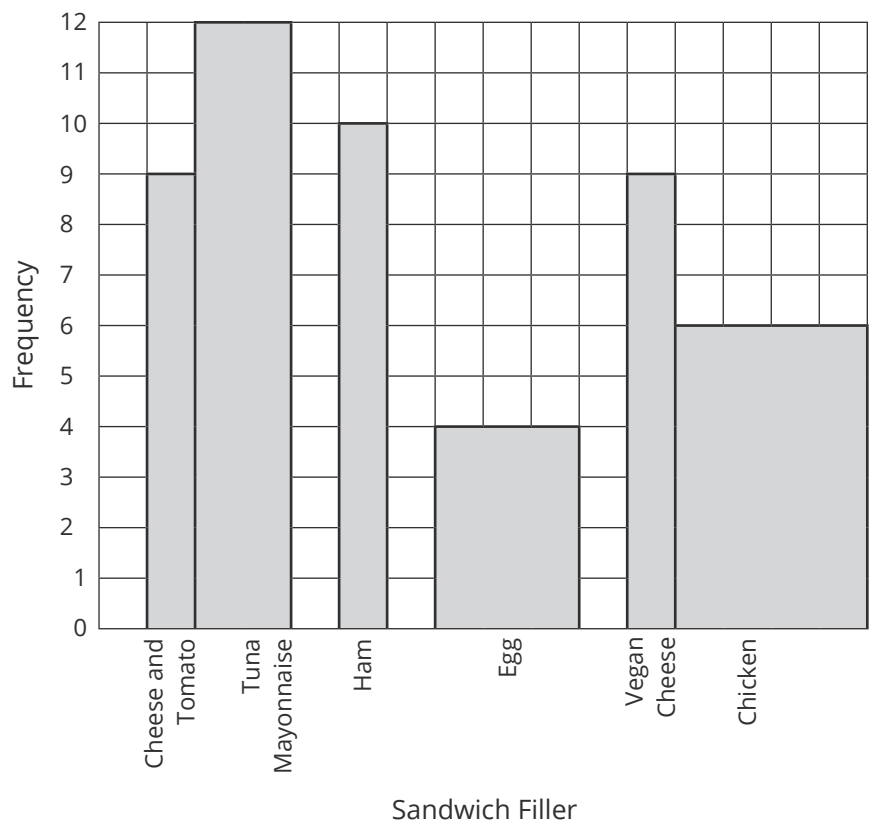
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c. In total, £56.25 was raised between all the year groups. Use this information to complete the pictogram.
