

Discussion Problems

Step 2: Comparison, Sum and Difference

National Curriculum Objectives:

Mathematics Year 4: (4S1) [Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs](#)

Mathematics Year 4: (4S2) [Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs](#)

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 4 Statistics](#) resources.

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

Comparison, Sum and Difference

1. Sarah is thinking about some rules for creating and interpreting bar charts.

1. The highest value on the scale must represent the total number of people in the survey.
2. To compare two values, you add them together.
3. The least popular option will have a blank space instead of a bar.
4. No two bars can be the same.



Prove Sarah wrong by collecting data from your friends and create a bar chart to support your answer.

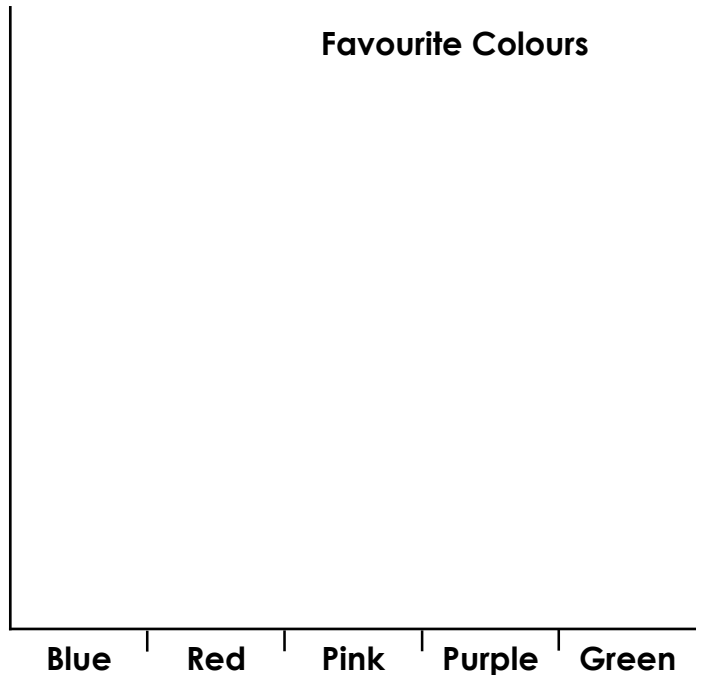
DP

2. Use the clues below to complete the bar chart and the table. You can create the data as long as it fits the clues and you must label the y axis.

- More than 50 people were asked.
- Blue is most popular colour.
- Red has twice the number of votes as purple.
- Pink is the least popular colour.
- Pink has 3 votes less than purple.
- Two colours have the same number of votes.

| Colour | Number |
|--------|--------|
| Blue | |
| Red | |
| Pink | |
| Purple | |
| Green | |

Favourite Colours



DP

Comparison, Sum and Difference

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1. The highest value on the scale must represent the total number of people in the survey.
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Various possible answers for example:

- Children may draw the scale with a lower value than the total number of respondents in their survey.
- Children may compare 2 values by using subtraction to find the difference.
- Children may not have a blank space for the least popular option, depending on the data.
- Children may show that 2 or more bars can be the same depending on the data.

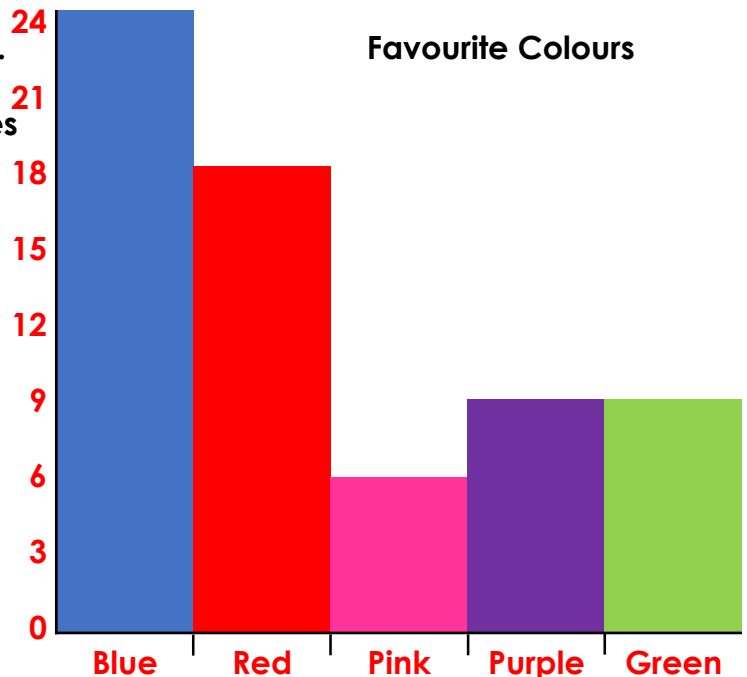
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| Colour | Number |
|--------|--------|
| Blue | 24 |
| Red | 18 |
| Pink | 6 |
| Purple | 9 |
| Green | 9 |



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