# Lesson 2(R) – Statistics – Draw Pictograms

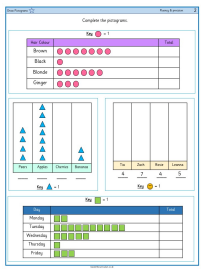
| NC Objective: | Resources needed: | Vocabulary: |
|---|---|---|
| Interpret and construct simple pictograms, tally charts, block diagrams and simple tables | Differentiated Sheets<br>Teaching Slides | Pictogram, data, represent, horizontally, vertically |

Children are introduced to pictograms.
Children build pictograms using concrete apparatus such as counters or cubes then move to drawing their own pictures. They need to be able to complete missing column or rows. They should use the same picture to represent all the data in the pictogram and line this up carefully. It is important that children see pictograms both horizontally and vertically.

Key Questions:

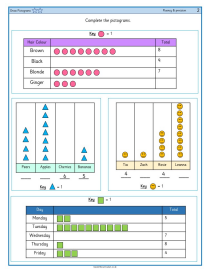
How do you know how many images to draw?
What is the same and what is different about these two pictograms? (same data but shown horizontally and vertically) Which pictogram is easier to read? Why?
What simple symbol could we draw to represent the data?
Why did you choose this?

## ★ Working Towards



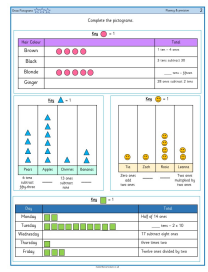
Children complete the information separately on the pictograms and use the same picture to represent all the data in the pictogram and line this up carefully.

## ★★ Working Within



Children complete missing column or rows and
use the same picture to represent all the data in the pictogram and line this up carefully.

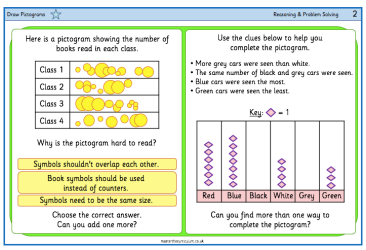
## ★★★ Greater Depth

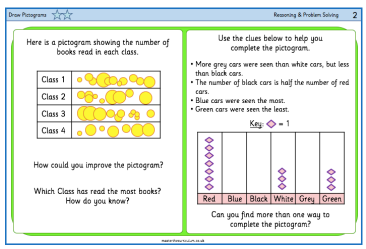


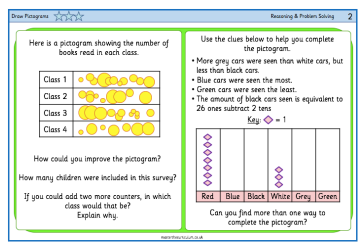
Children complete missing column or rows and use the same picture to represent all the data in the pictogram and line this up carefully.

They have to work out the number needed on the pictogram, which is written in words and number sentences.

## Reasoning & Problem Solving



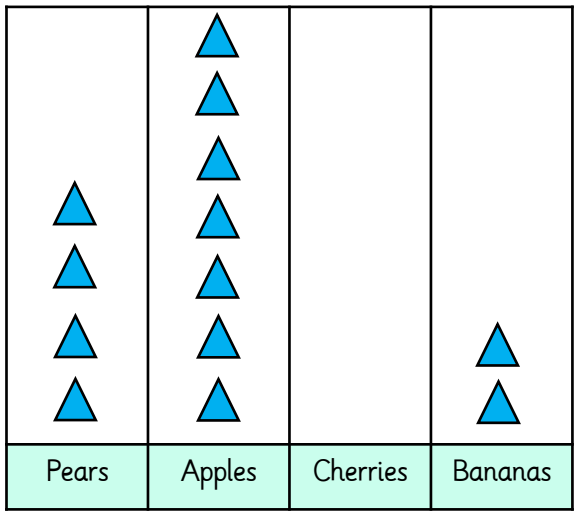



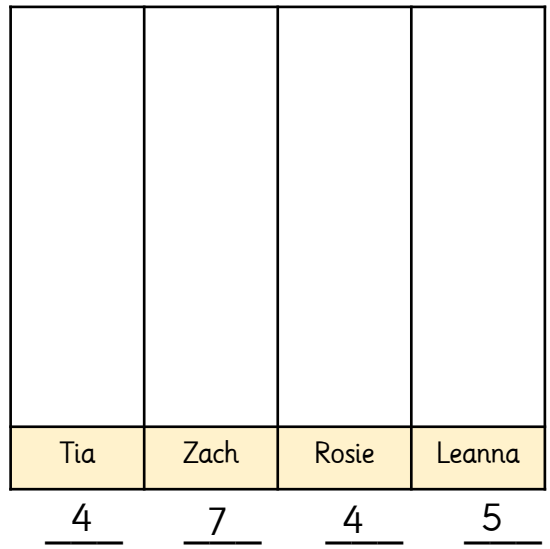
Complete the pictograms.

Key ● = 1

| Hair Colour | | Total |
|---|---|---|
| Brown | ● ● ● ● ● ● ● | |
| Black | ● | |
| Blonde | ● ● ● ● ● ● | |
| Ginger | ● ● ● | |




Key ▲ = 1




Key ☺ = 1

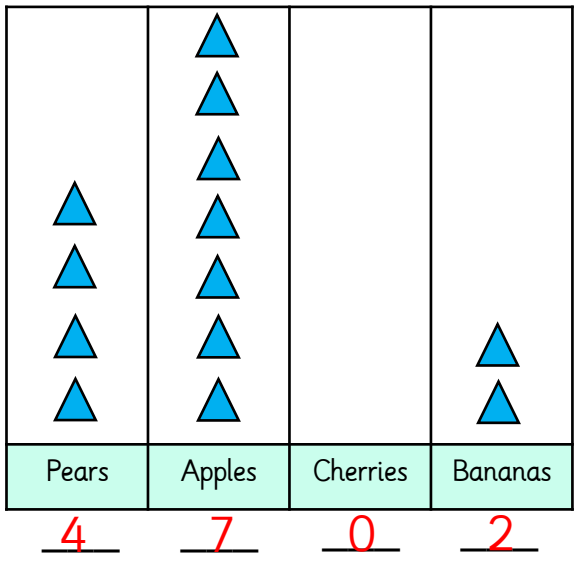
Key ■ = 1

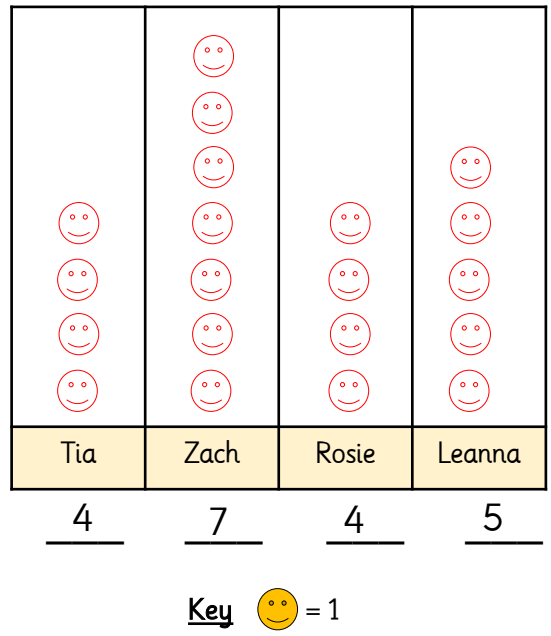
| Day | | Total |
|---|---|---|
| Monday | ■ ■ | |
| Tuesday | ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ | |
| Wednesday | ■ ■ ■ ■ ■ | |
| Thursday | ■ | |
| Friday | ■ ■ ■ | |

Complete the pictograms.

Key ● = 1

| Hair Colour | | Total |
|---|---|---|
| Brown | ●●●●●●● | 7 |
| Black | ● | 1 |
| Blonde | ●●●●●● | 6 |
| Ginger | ●●● | 3 |



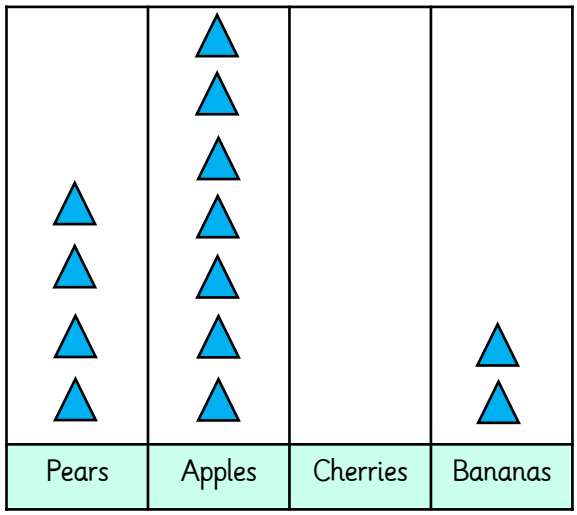

Key ■ = 1

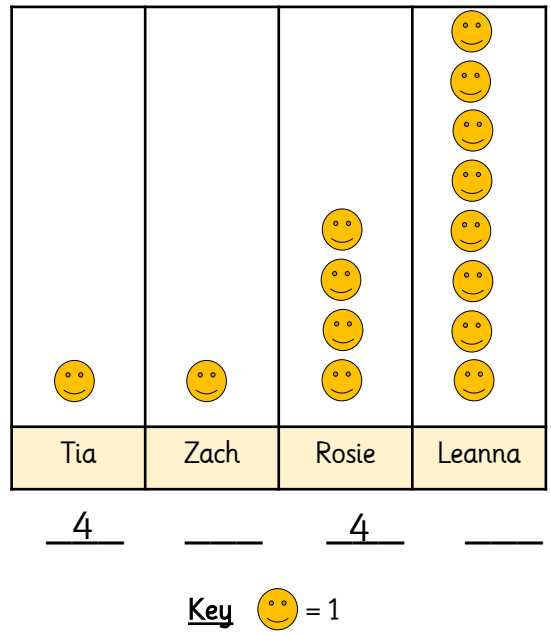
| Day | | Total |
|---|---|---|
| Monday | ■■ | 2 |
| Tuesday | ■■■■■■■■■■ | 10 |
| Wednesday | ■■■■■ | 5 |
| Thursday | ■ | 1 |
| Friday | ■■■ | 3 |

Complete the pictograms.

Key ● = 1

| Hair Colour | | Total |
|---|---|---|
| Brown | ● ● ● ● ● ● ● ● | 8 |
| Black | | 9 |
| Blonde | ● ● ● ● ● ● | 7 |
| Ginger | ● ● ● | |



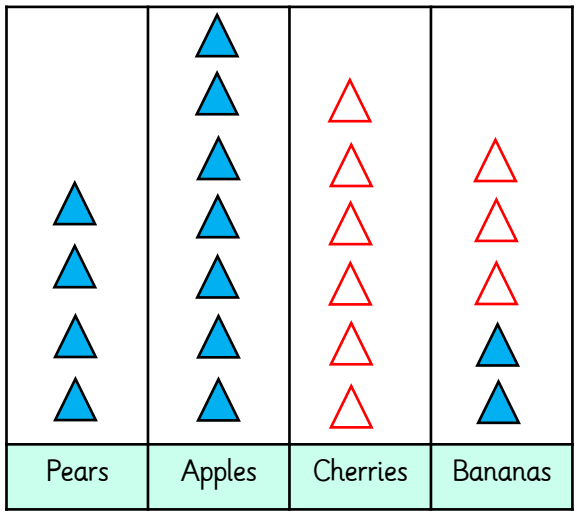

Key ■ = 1

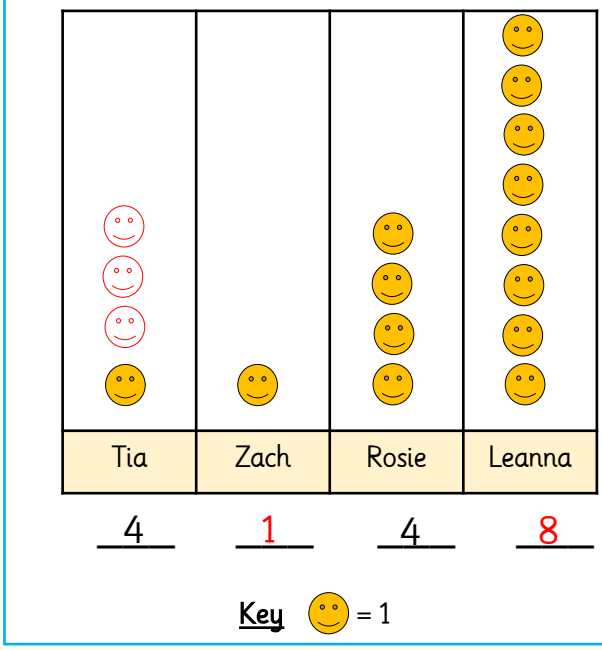
| Day | | Total |
|---|---|---|
| Monday | ■ ■ | 5 |
| Tuesday | ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ | |
| Wednesday | | 7 |
| Thursday | ■ | 8 |
| Friday | ■ ■ ■ | 4 |

Complete the pictograms.

Key ● = 1

| Hair Colour | | Total |
|---|---|---|
| Brown | ● ● ● ● ● ● ● ● | 8 |
| Black | ○ ○ ○ ○ ○ ○ ○ ○ ○ | 9 |
| Blonde | ● ● ● ● ● ● ○ | 7 |
| Ginger | ● ● ● | 3 |




Key ■ = 1

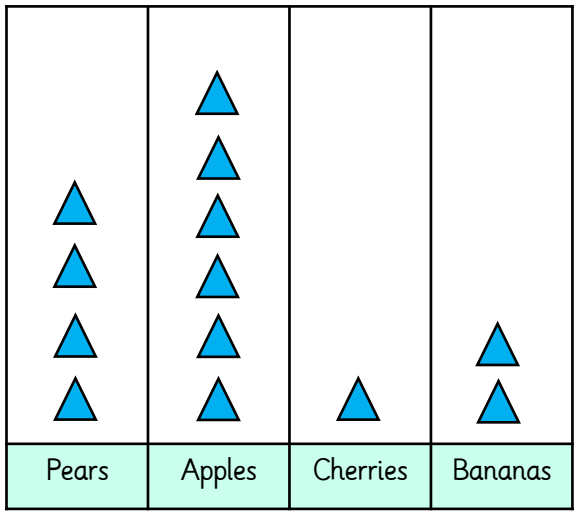
| Day | | Total |
|---|---|---|
| Monday | ■ ■ □ □ □ | 5 |
| Tuesday | ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ | 10 |
| Wednesday | □ □ □ □ □ □ □ | 7 |
| Thursday | ■ □ □ □ □ □ □ □ | 8 |
| Friday | ■ ■ ■ □ | 4 |

Complete the pictograms.

Key ● = 1

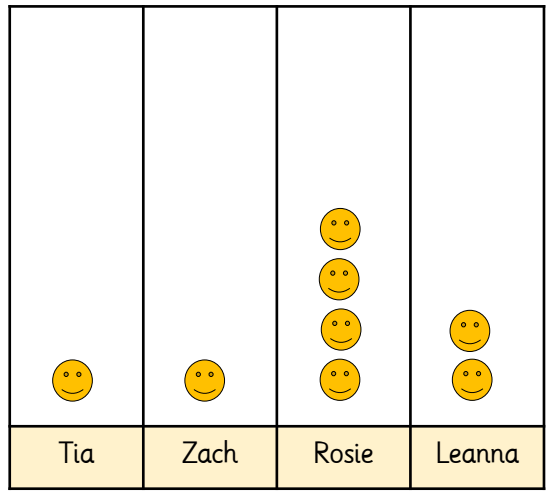
| Hair Colour | | Total |
|---|---|---|
| Brown | ● ● ● ● | 1 ten – 4 ones |
| Black | | 3 tens subtract 30 |
| Blonde | ● ● ● ● ● | ____ tens – fifteen |
| Ginger | | 28 ones subtract 2 tens |

Key ▲ = 1




6 tens subtract fifty-three ____ 13 ones subtract nine ____

Key ☺ = 1




Zero ones add two ones ____ ____ Two ones multiplied by two ones

Key ■ = 1

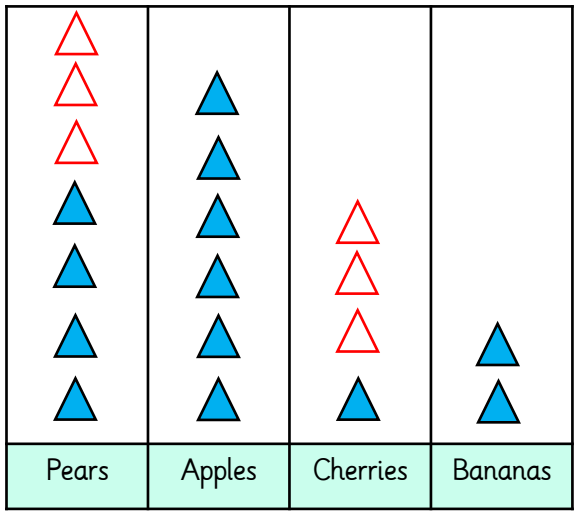
| Day | | Total |
|---|---|---|
| Monday | ■ ■ | Half of 14 ones |
| Tuesday | ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ | ____ tens – 2 x 10 |
| Wednesday | | 17 subtract eight ones |
| Thursday | ■ | three times two |
| Friday | ■ ■ ■ | Twelve ones divided by two |

Complete the pictograms.

Key ● = 1

| Hair Colour | | Total |
|---|---|---|
| Brown | ●●●●○○ | 1 ten – 4 ones |
| Black | | 3 tens subtract 30 |
| Blonde | ●●●●● | 2 tens – fifteen |
| Ginger | ○○○○○○○○ | 28 ones subtract 2 tens |

Key ▲ = 1



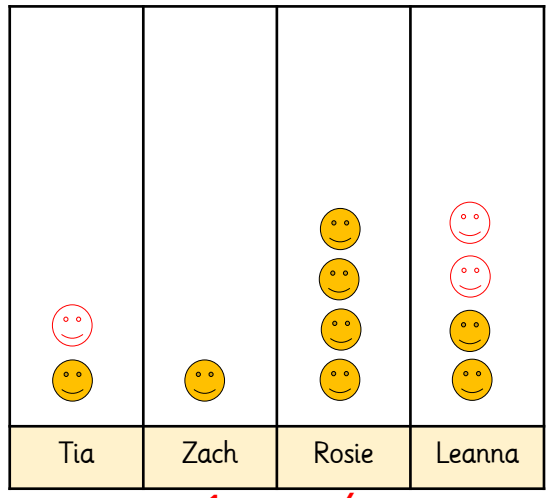

6 tens subtract fifty-three

6

13 ones subtract nine

2

Key ☺ = 1




Zero ones add two ones

1

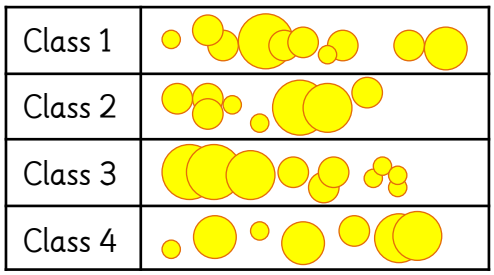
4

Two ones multiplied by two ones

Key ■ = 1

| Day | | Total |
|---|---|---|
| Monday | ■■□□□□□ | Half of 14 ones |
| Tuesday | ■■■■■■■■■■ | 3 tens – 2 x 10 |
| Wednesday | □□□□□□□□□ | 17 subtract eight ones |
| Thursday | ■□□□□□ | three times two |
| Friday | ■■■□□□ | Twelve ones divided by two |

Here is a pictogram showing the number of books read in each class.




Why is the pictogram hard to read?

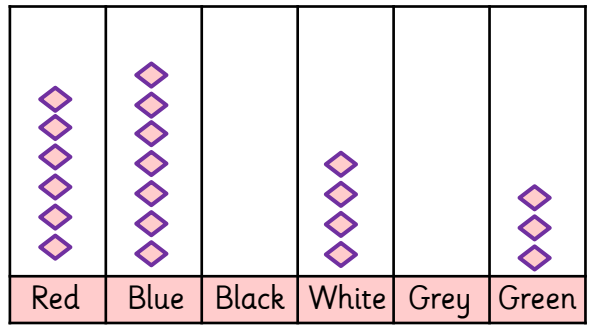
- Symbols shouldn't overlap each other.
- Book symbols should be used instead of counters.
- Symbols need to be the same size.

Choose the correct answer.
Can you add one more?

Use the clues below to help you complete the pictogram.

- More grey cars were seen than white.
- The same number of black and grey cars were seen.
- Blue cars were seen the most.
- Green cars were seen the least.

Key: ◇ = 1




Can you find more than one way to complete the pictogram?



Draw Pictograms ☆ Reasoning & Problem Solving 3(R)

Here is a pictogram showing the number of books read in each class.

Class 1
Class 2
Class 3
Class 4

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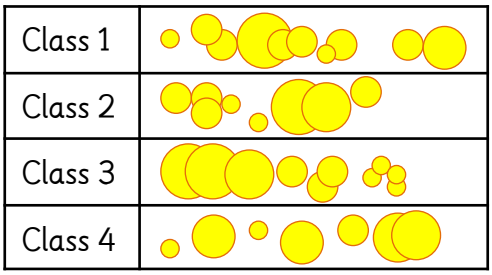



Why is the pictogram hard to read?

- Symbols shouldn't overlap each other. ✓
- Book symbols should be used instead of counters.
- Symbols need to be the same size. ✓

Choose the correct answer.

Can you add one more?

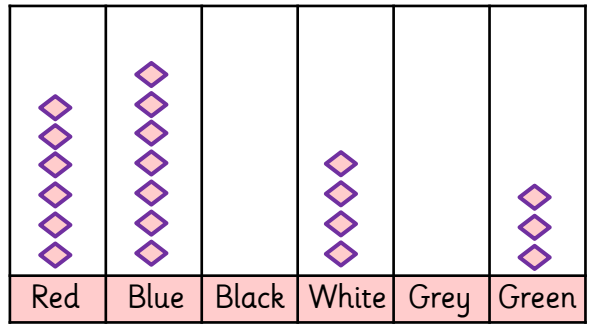
The reason why the pictogram is hard to read is not because the book symbols are used instead of counters. It is important that symbols are lined up, evenly spaced and are the same size. Also, there should be a key.

Use the clues below to help you complete the pictogram.

- More grey cars were seen than white.
- The same number of black and grey cars were seen.
- Blue cars were seen the most.
- Green cars were seen the least.

Various answers: E.g.
Red: 6
Blue: 7
Black: 5
White: 4
Grey: 5
Green: 3

Key: ◇ = 1




Can you find more than one way to complete the pictogram?



Draw Pictograms ☆ Answers Reasoning & Problem Solving 3(R)

Here is a pictogram showing the number of books read in each class.

Class 1
Class 2
Class 3
Class 4

Why is the pictogram hard to read?

- Symbols shouldn't overlap each other. ✓
- Book symbols should be used instead of counters.
- Symbols need to be the same size. ✓

Choose the correct answer.

Can you add one more?

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Use the clues below to help you complete the pictogram.

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Various answers: E.g.
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Key: ◇ = 1

Red
Blue
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Green

Can you find more than one way to complete the pictogram?

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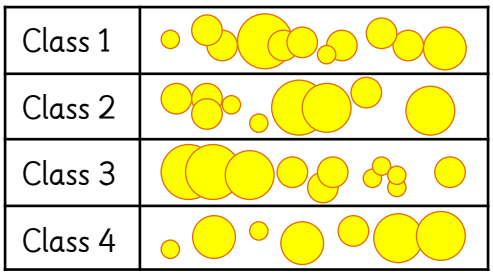


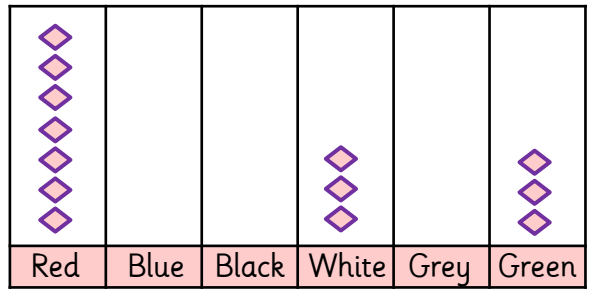

How could you improve the pictogram?

Which Class has read the most books? How do you know?

Use the clues below to help you complete the pictogram.

- More grey cars were seen than white cars, but less than black cars.
- The number of black cars is half the number of red cars.
- Blue cars were seen the most.
- Green cars were seen the least.

Key: ◇ = 1




Can you find more than one way to complete the pictogram?



Draw Pictograms ☆☆ Reasoning & Problem Solving 3(R)

Here is a pictogram showing the number of books read in each class.

Class 1
Class 2
Class 3
Class 4

How could you improve the pictogram?

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Blue
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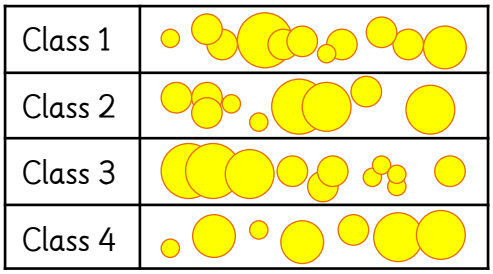



How could you improve the pictogram?

Which Class has read the most books? How do you know?

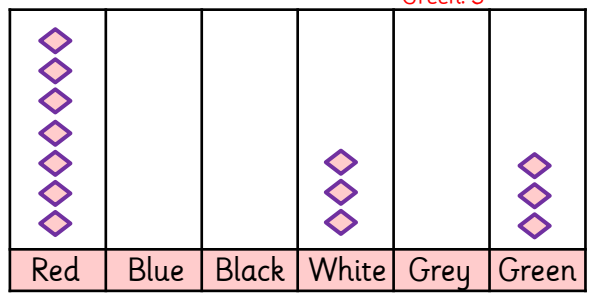
It is important that symbols don't overlap each other. Also, symbols need to be lined up, evenly spaced and to be the same size.
There should be a key.
If a key is 1 counter = 1 book, we can find that:
the most books read is Class 1 and Class 3 - 11 books each.

Use the clues below to help you complete the pictogram.

- More grey cars were seen than white cars, but less than black cars.
- The number of black cars is half the number of red cars.
- Blue cars were seen the most.
- Green cars were seen the least.

Various answers: E.g.
Red: 12
Blue: 13
Black: 6
White: 4
Grey: 5
Green: 3

Key: ◇ = 1

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Draw Pictograms ☆☆ Answers Reasoning & Problem Solving 3(R)

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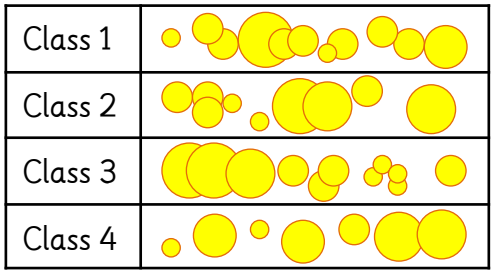


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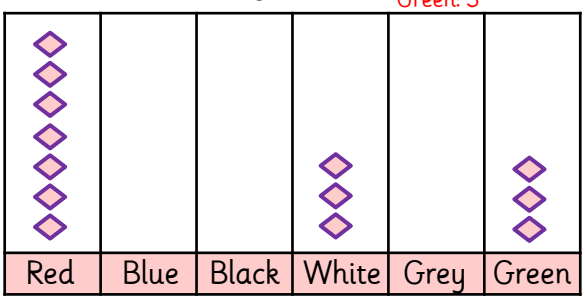


Can you find more than one way to complete the pictogram?

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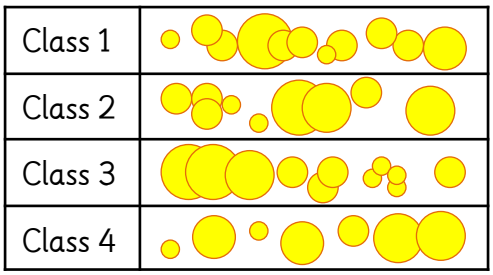
Here is a pictogram showing the number of books read in each class.




How could you improve the pictogram?

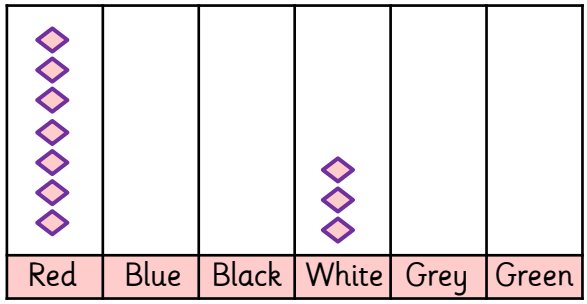
How many children were included in this survey?

If you could add two more counters, in which class would that be?
Explain why.

Use the clues below to help you complete the pictogram.

- More grey cars were seen than white cars, but less than black cars.
- Blue cars were seen the most.
- Green cars were seen the least.
- The amount of black cars seen is equivalent to 26 ones subtract 2 tens

Key: ◇ = 1




Can you find more than one way to complete the pictogram?



Draw Pictograms ☆☆☆ Reasoning & Problem Solving 3(R)

Here is a pictogram showing the number of books read in each class.

Class 1
Class 2
Class 3
Class 4

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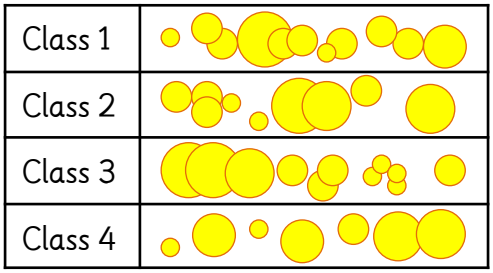


How could you improve the pictogram?
How many children were included in this survey?
If you could add two more counters, in which class would that be?
Explain why.

It is important that symbols don't overlap each other. Also, symbols need to be lined, evenly spaced and to be the same size.
There should be a key.
If a key is 1 counter = 1 book, we can find that:
There were 38 children included in the survey.
Children can notice that if they add 2 counters to Class 4, then there will be the same number of counters in Class 2 and Class 4.
Also, they can add 2 counters to Class 1 or Class 3 so that one of them becomes the class with the greatest number of books read.

Use the clues below to help you complete the pictogram.

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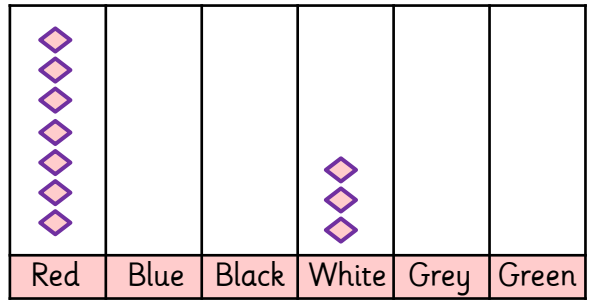
- Blue cars were seen the most.
- Green cars were seen the least.
- The amount of black cars seen is equivalent to 26 ones subtract 2 tens

Various answers: E.g.
Red: 8
Blue: 9
Black: 6
White: 4
Grey: 5
Green: 3

Key: ◇ = 1

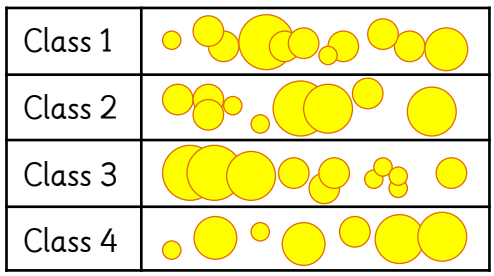



Can you find more than one way to complete the pictogram?



Draw Pictograms ☆☆☆ Answers Reasoning & Problem Solving 3(R)

Here is a pictogram showing the number of books read in each class.




How could you improve the pictogram?
How many children were included in this survey?
If you could add two more counters, in which class would that be?
Explain why.

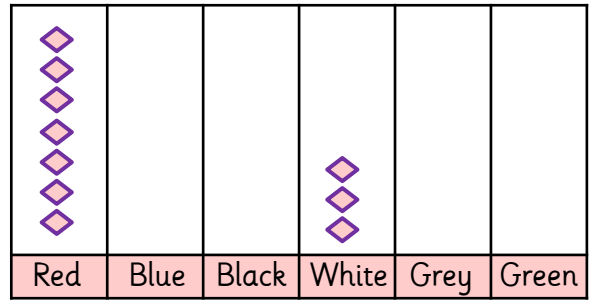
It is important that symbols don't overlap each other. Also, symbols need to be lined, evenly spaced and to be the same size.
There should be a key.
If a key is 1 counter = 1 book, we can find that:
There were 38 children included in the survey.
Children can notice that if they add 2 counters to Class 4, then there will be the same number of counters in Class 2 and Class 4.
Also, they can add 2 counters to Class 1 or Class 3 so that one of them becomes the class with the greatest number of books read.

Use the clues below to help you complete the pictogram.

- More grey cars were seen than white cars, but less than black cars.
- Blue cars were seen the most.
- Green cars were seen the least.
- The amount of black cars seen is equivalent to 26 ones subtract 2 tens

Various answers: E.g.
Red: 8
Blue: 9
Black: 6
White: 4
Grey: 5
Green: 3

Key: ◇ = 1




Can you find more than one way to complete the pictogram?

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