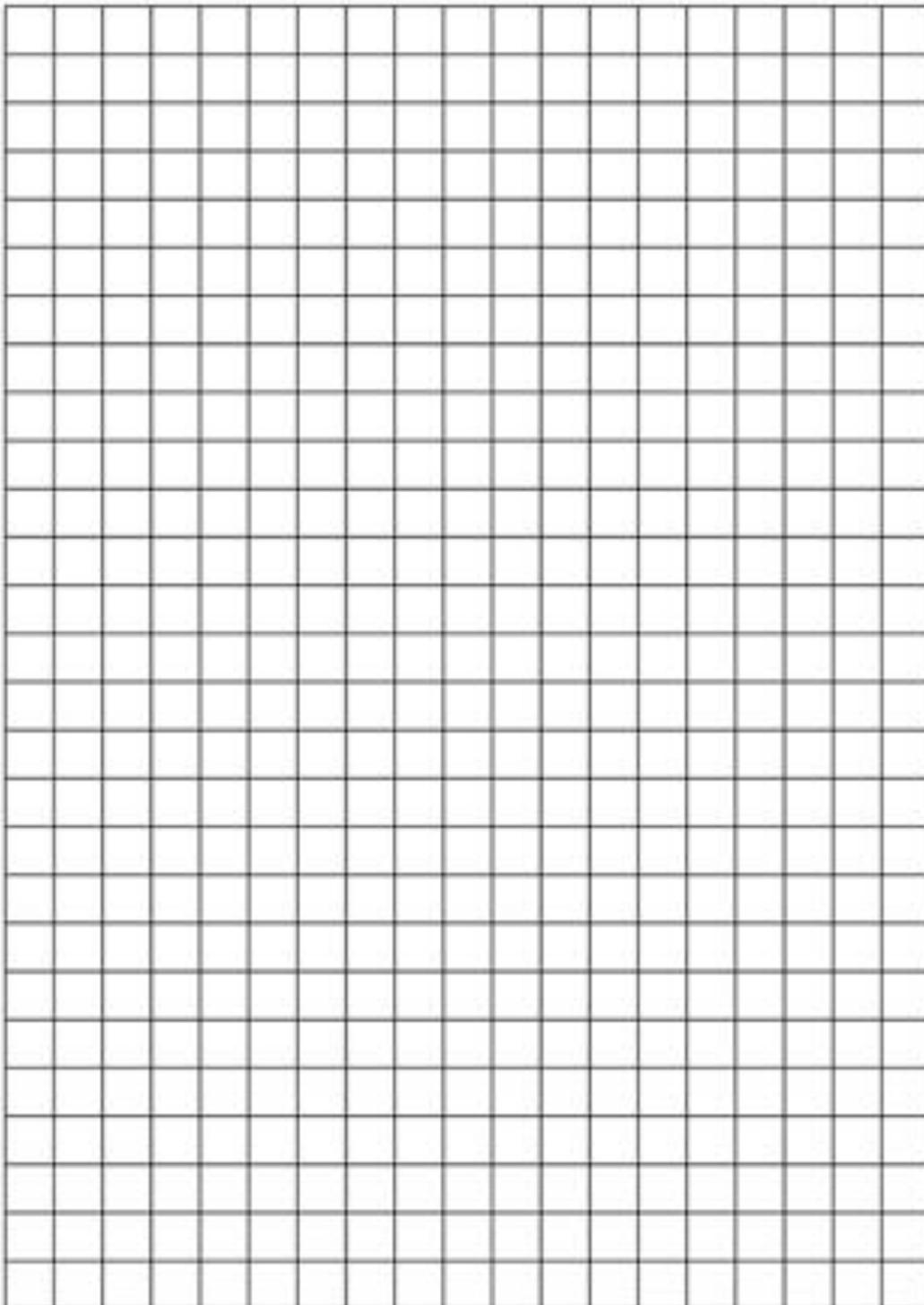


Maths problem from the video

Day	Number of tickets sold
Monday	45
Tuesday	60
Wednesday	35
Thursday	70
Friday	55



Introduction to Statistics

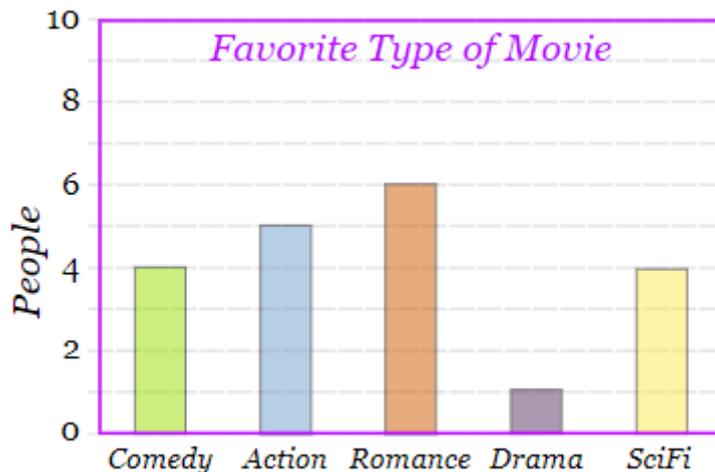
What is a bar chart?

A Bar Graph (also called Bar Chart) is a graphical display of data using bars of different heights

Imagine you just did a survey of your friends to find which kind of movie they liked best:

<i>Table: Favorite Type of Movie</i>				
Comedy	Action	Romance	Drama	SciFi
4	5	6	1	4

We can show that on a bar graph like this:



It is a really good way to show relative sizes: we can see which types of movie are most liked, and which are least liked, at a glance.

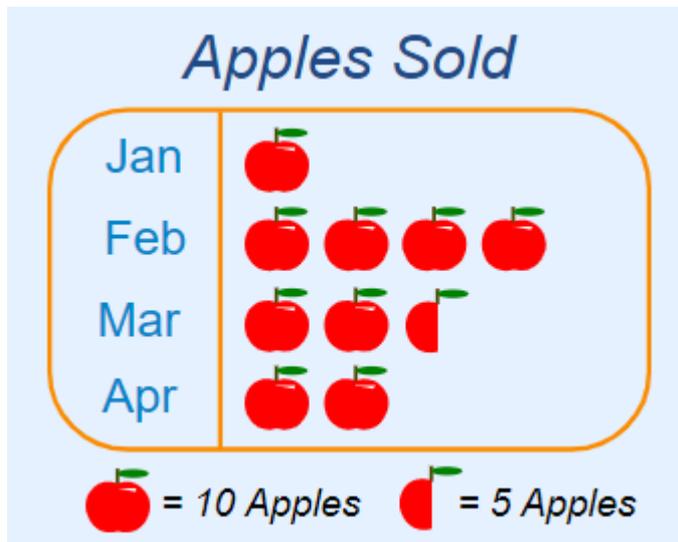
We can use bar graphs to show the relative sizes of many things, such as what type of car people have, how many customers a shop has on different days and so on.

What is a Pictograph?

Pictograph is a way of showing data using images.

Each image stands for a certain number of things.

Here is a pictograph of how many apples were sold at the local shop over 4 months:



Note that each picture of an apple means **10 apples** (and the half-apple picture means 5 apples).

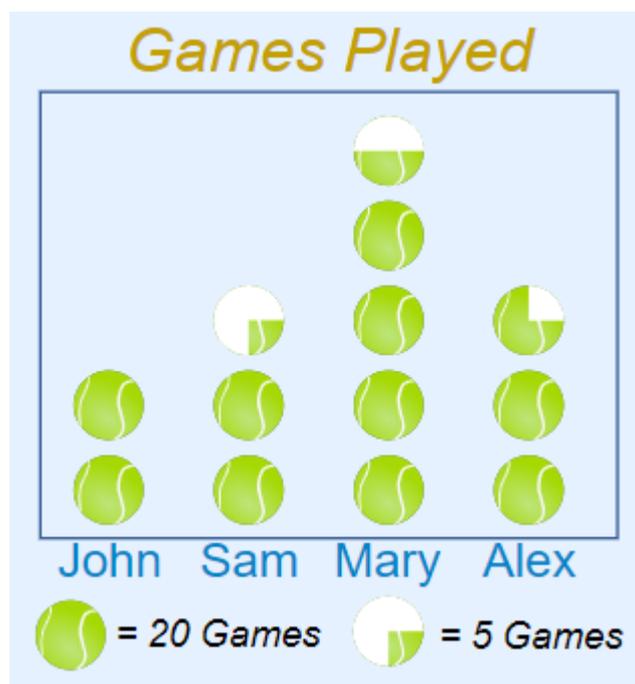
So the pictograph is showing:

- In January **10 apples** were sold
- In February **40 apples** were sold
- In March **25 apples** were sold
- In April **20 apples** were sold

It is a fun and interesting way to show data.

But it is not very accurate: in the example above we can't show just 1 apple sold, or 2 apples sold etc.

Pictographs can also be vertical, like this:



What is Discrete Data

Discrete Data can only take certain values.

Example: the number of students in a class

We can't have half a student!

Example: the results of rolling 2 dice

Only has the values 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12

What is Continuous Data



Continuous Data can take any value (within a range)

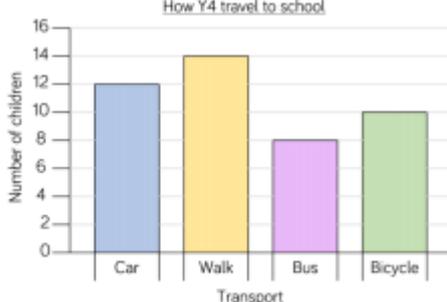
Examples:

- A person's height: could be any value (within the range of human heights), not just certain fixed heights,
- Time in a race: you could even measure it to fractions of a second,
- A dog's weight,
- The length of a leaf,
- Lots more!

Maths Activity 1: Fluency

 Complete the table using the information in the bar chart.

How Y4 travel to school



Transport	Number of children
Car	
Walk	
Bus	
Bicycle	

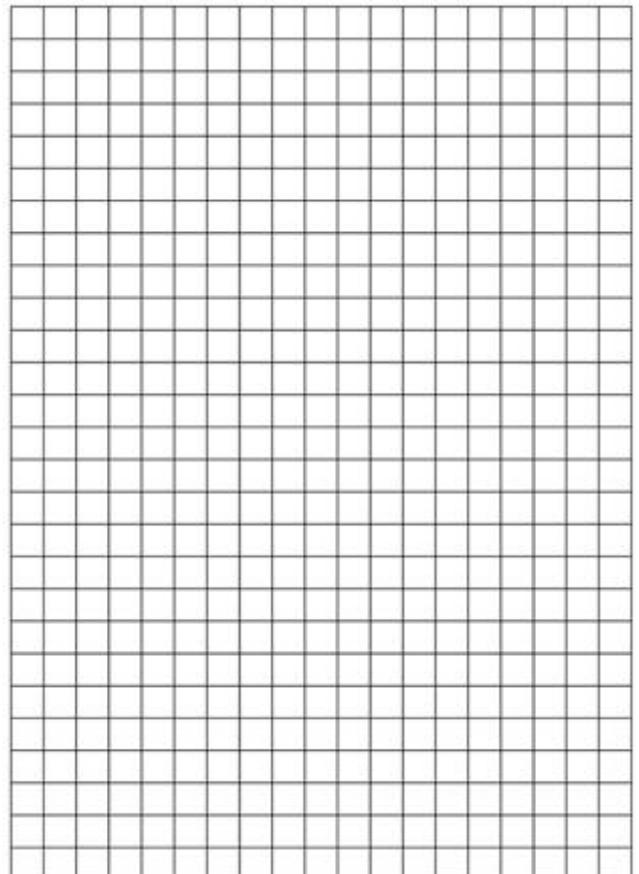
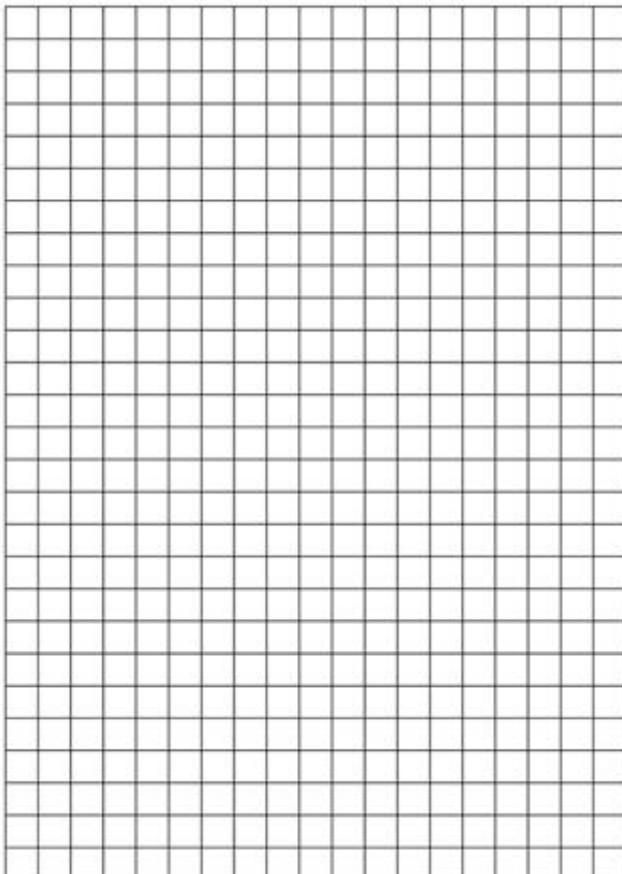
What is the most/least popular way to get to school?
How many children walk to school?

 Represent the data in each table as a bar chart.

Team	Number of house points
Sycamore	
Oak	
Beech	
Ash	

 = 20 points

Day	Number of tickets sold
Monday	55
Tuesday	30
Wednesday	45
Thursday	75
Friday	85



Maths Activity 2: Reasoning and Problem Solving

Halifax City Football Club sold the following number of season tickets:

- Male adults - 6,382
- Female adults - 5,850
- Boys - 3,209
- Girls - 5,057

Would you use a bar chart, table or pictogram to represent this data? Explain why.

Here is some information about the number of tickets sold for a concert.

Day	Number of tickets sold
Monday	55
Tuesday	30
Wednesday	45
Thursday	75
Friday	85

Jack starts to create a bar chart to represent the number of concert tickets sold during the week.



What advice would you give Jack about the scale he has chosen?

What would be a better scale to use?

Is there anything else missing from the bar chart?

Alex wants to use a pictogram to represent the favourite drinks of everyone in her class.



I will use this image  to represent 5 children.

Explain why this is not a good idea.

Maths Activity 3: Representing data in a bar graph

Complete the table and draw a bar graph using the following information and the squared paper provided.

1. 24 children were asked to choose their favourite colour.
2. A quarter of the children chose red.
3. Two children chose green.
4. The number of children who like pink is double the number of children who like green.
5. Orange is as popular as green.
6. The number of children who like blue is half the number of children who like red.
7. No children like brown.
8. An eighth of the children like purple.
9. The rest of the children like yellow.

RED	GREEN	PINK	ORANGE	BLUE	BROWN	PURPLE	YELLOW

