White Rose Maths

1 The pictogram shows the number of ice creams sold in a shop.

Ice cream flavour	Number of ice creams sold
vanilla	🍦 🍦 🍦 🍦
chocolate	🍦 🍦 🍦 🍦 🍦 🍦
strawberry	🍦 🍦
mint choc	🍦 🍦 🍦 🍦

Key 🍦 = 2 ice creams

a) How many vanilla ice creams were sold? 8

b)

The shop sold 6 chocolate ice creams.

What mistake has Annie made?

She has counted the number of pictures of ice creams on the pictogram.
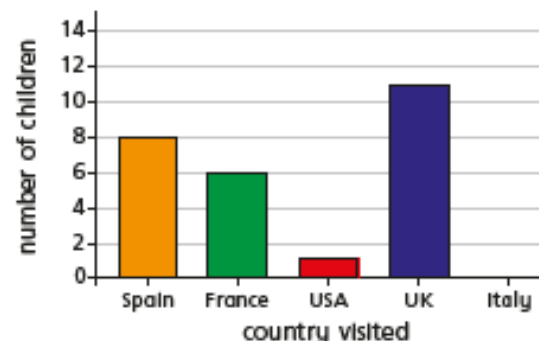
c) How many chocolate ice creams were sold? 12

d) How many strawberry ice creams were sold? 3

e) Seven mint choc ice creams were sold.
Complete the pictogram to show this.

2 The bar chart shows the number of children who went on holiday to some different countries.

a) Complete the table using the information in the bar chart.

Country	Number of of children visiting
Spain	8
France	6
USA	1
UK	11
Italy	0

b) Complete the pictogram using the information in the bar chart.

Country	Number of of children visiting
Spain	⬤ ⬤
France	⬤ ◗
USA	◢
UK	⬤ ⬤ ◖
Italy	

Key ⬤ = 4 children

3

Chart A   Chart B   Chart C

number of counters (Chart A) — B, G, Y, P | colour
number of counters (Chart B) — B, G, Y, P | colour
number of counters (Chart C) — B, G, Y, P | colour
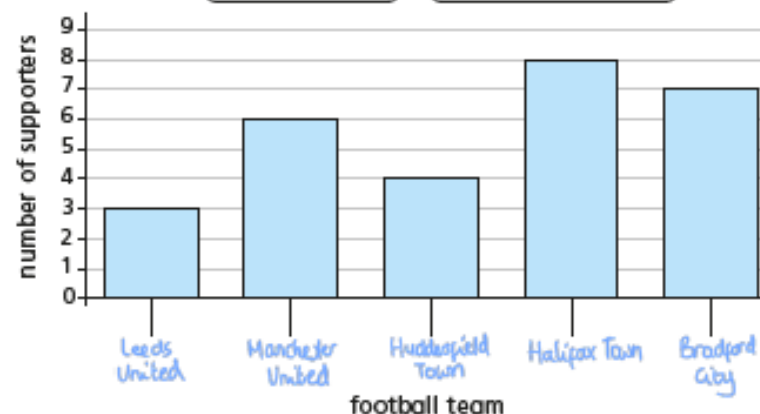
Which chart best represents the picture?   *chart C*

Talk to a partner about the reasons for your choice.

4 Use the clues to label the bar chart.

- The number of Huddersfield Town supporters is half the number of Halifax Town supporters.
- Most people support Halifax Town.
- More people support Manchester United than Leeds United.
- There is 1 less supporter of Bradford City than Halifax Town.

Bradford City   Huddersfield Town   Halifax Town
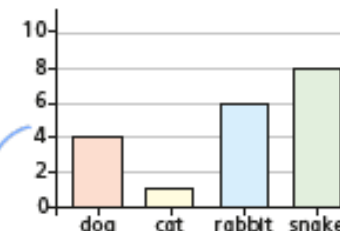
Leeds United   Manchester United

number of supporters

Leeds United   *Manchester United*   *Huddersfield Town*   *Halifax Town*   *Bradford City*

football team

5 Four classes of children were asked what their favourite animals are. Match the tables to the charts.

Class A	
dog	8
cat	2
rabbit	7
snake	12

Class B	
dog	4
cat	1
rabbit	3
snake	4

Class C	
dog	4
cat	1
rabbit	6
snake	8

Class D	
dog	8
cat	2
rabbit	7
snake	3

Key [] = 4 children

Key [] = 4 children

1 The bar chart shows the number of visitors to a museum in a week.

number of visitors / day

a) How many more visitors went to the museum on Tuesday than on Wednesday?

11

b) What is the difference between the number of visitors on Monday and the number of visitors on Friday?

1

c) What was the total number of visitors for the whole week?

37

d) If there were 3 times as many visitors on Saturday as there were on Thursday, how many people visited on Saturday?

21

2 The pictogram shows the points scored in a game by five teams.

Team	Points
Red	
Blue	
Green	
Yellow	
Pink	

Key ▢ = 4 points

a) Write <, > or = to compare the points scored by the teams.

Red (<) Blue and Green

Red and Blue (<) Green and Yellow

Red and Green (=) Yellow and Blue

Blue and Green (=) Yellow

b) The Pink team scored half the number of points that the Green team scored.

Complete the pictogram for the Pink team.

c) Teddy is working out the difference in points between the Red and Green teams.

I can work out how many points each team scored and then subtract one from the other.

Is there another way Teddy could work out the answer?

3 Two children are asked to find out how many hours of sunshine there were altogether.

Country	Number of hours sunshine
Spain	☀ ☀ ☀ ☀ ☀ ☀
UK	☀ ☀ ☀
Italy	☀ ☀ ☀ ☀ ☀
Germany	☀ ☀ ☀
Iceland	☀

Key ☀ = 3 hours

a)

I can find out how many hours sunshine each country has and then add up all the totals.

Use Mo's method to calculate the total hours of sunshine.

54 hours

b)

I can count how many sunshine symbols there are altogether and multiply that by 3

Use Rosie's method to calculate the total hours of sunshine.

54 hours

Which method is the most efficient?

Will that always be the case?

4 The table shows the number of men and women who watched three different films.

Film	Women	Men	Total
A	364	618	982
B	411	484	895
C	609	255	864
Total	1,384	1,357	2,741

a) Complete the table.

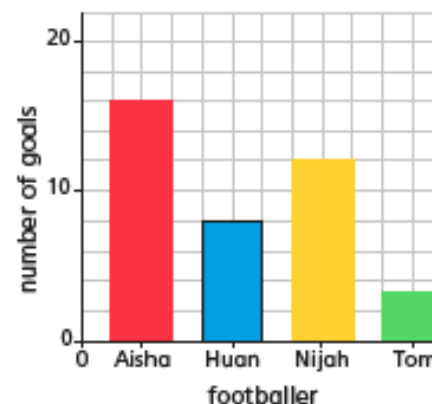b) Are these statements true or false?

More women than men watched one of the films. _true_

Film B was the most popular. _false_

5 The bar chart represents the number of goals scored by four footballers.

Use the clues to complete the bar chart.

- Tom has scored 13 fewer goals than Aisha.

- Aisha has scored twice as many goals as Huan.

- Huan and Nijah combined have scored a total of 20 goals.

Introducing line graphs

1 The line graph shows the growth of some cress over 10 days.

a) How tall was the cress on Day 2? **3** cm

b) On what day did the cress reach 10 cm? day **6**

c) Estimate the height of the cress on Day 5 **8** cm

d) Estimate when the cress will reach a height of 14 cm.

day **7**

e) Between which two consecutive days did the cress grow the most?

day **6** and day **7**

(or 7 & 8)

2 The line graph shows the distance a cyclist travels on a bike ride.

a) Fill in the missing labels.

b) How long did it take the cyclist to travel 10 miles?

2 hours

c) How far had the cyclist travelled after 4 hours?

15 miles

d) How far did the cyclist travel in total?

30 miles

e) How far did the cyclist travel between 4 and 6 hours?

0 miles

What might have happened during this time?

3 The table shows the temperature outside on Monday.

Time	09:00	10:00	11:00	12:00	13:00	14:00	15:00
Temperature (°C)	14	16	20	26	24	20	18

a) Use the information in the table to complete the line graph.
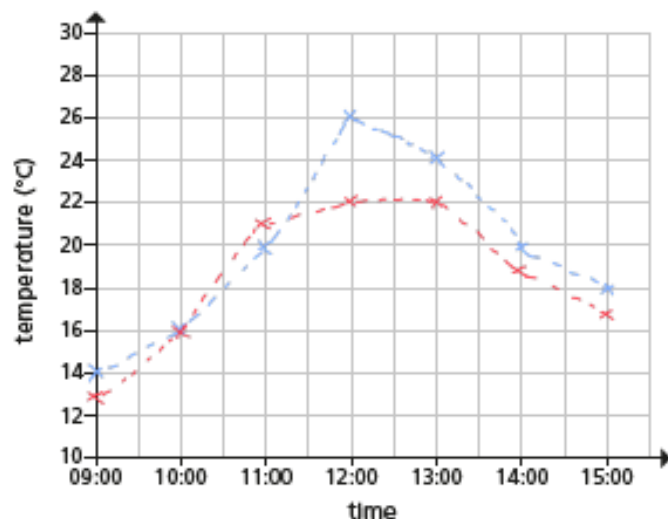

Key Monday _ _ _ _ _ _ _   Tuesday _ _ . _ _ . _

b) On Tuesday, the following temperatures were recorded.

Time	09:00	10:00	11:00	12:00	13:00	14:00	15:00
Temperature (°C)	13	16	21	22	22	19	17

Add the new information to your line graph using a different colour and complete the key.

c) At what time was it hotter on Tuesday than on Monday?

11:00

4 The graph shows the population of a town from 1950 to 2010

a) Circle the correct word to complete the statement.

The population of the town (increased) / decreased from 1950 to 2010

b) Estimate the highest recorded population.   10,200

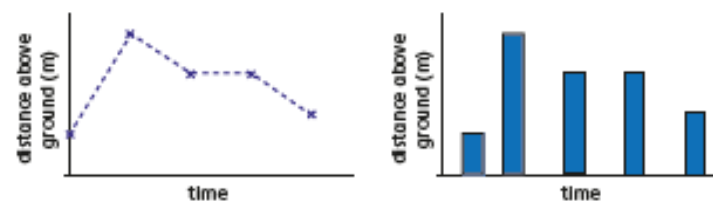c) In what year did the population first reach 7,000?   1980

d) Estimate the population in 1970   6,500

e) Estimate the population in 2006   9,500

5 The line graph and bar chart both show the distance above ground of a bird.
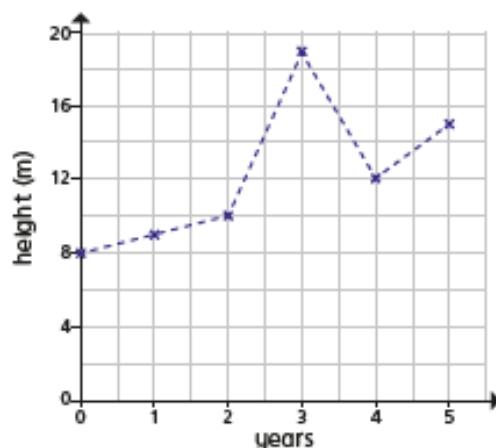

Which representation is more appropriate?   line graph
Explain your choice to a partner.

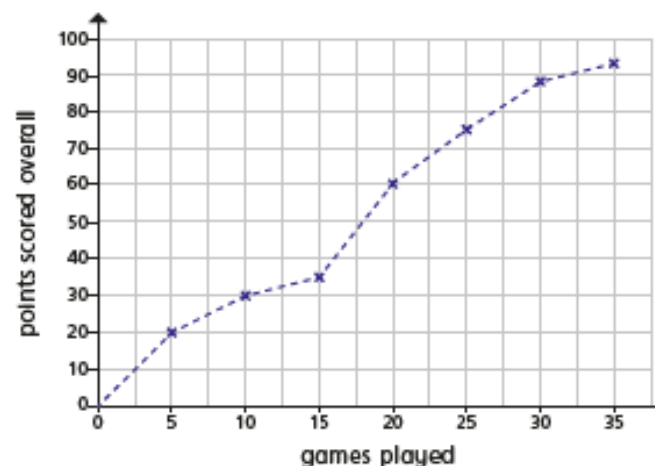**1** The line graph shows the growth of a tree.

height (m) / years

a) What is the difference in height between the start and end of recording? **7** m

b) How much did the tree grow between the 2nd and 3rd year? **9** m

c) What happened in year 3? What might have caused this?

d) By the 6th year the tree grows to three times the height it was in the 1st year.

The tree will be at the tallest height it has ever been.

Do you agree with Whitney? __yes__
Explain your answer.

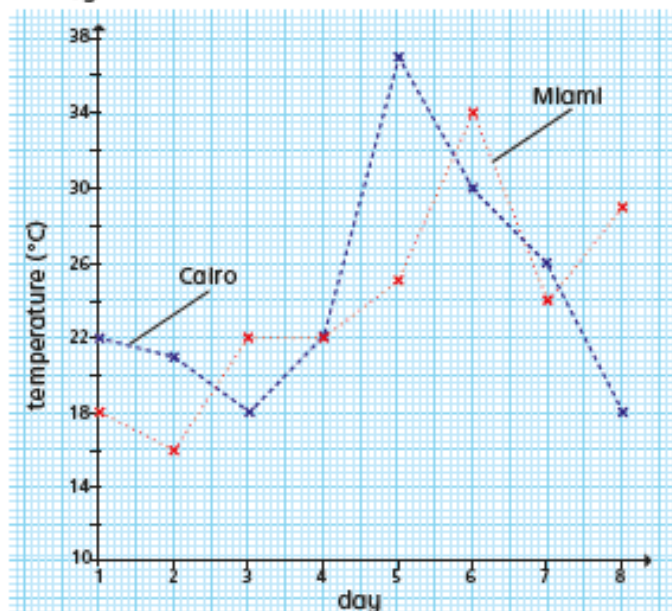**2** The line graph shows the number of points scored over 35 games.

points scored overall / games played

a) Use the line graph to complete the table.

Games	0	5	10	15	20	25	30	35
Points	0	20	30	35	60	75	88	93

b) How many points were scored between games 10 and 25? **45**

c) Between which games did the points exactly double?
between game **10** and game **20**

d) Between which games were the least number of points scored?
game **30** and game **35**
(or 10 and 15)

e) Estimate how many games it took to score 50 points. **18**

3 The line graph shows the temperatures in Miami and Cairo over 8 days.

a) On what day was the temperature the same in both cities?

day 4

b) What is the difference in temperature between the hottest days in both cities?   3 °C

c) What is the difference between the hottest recorded temperature and the lowest recorded temperature?
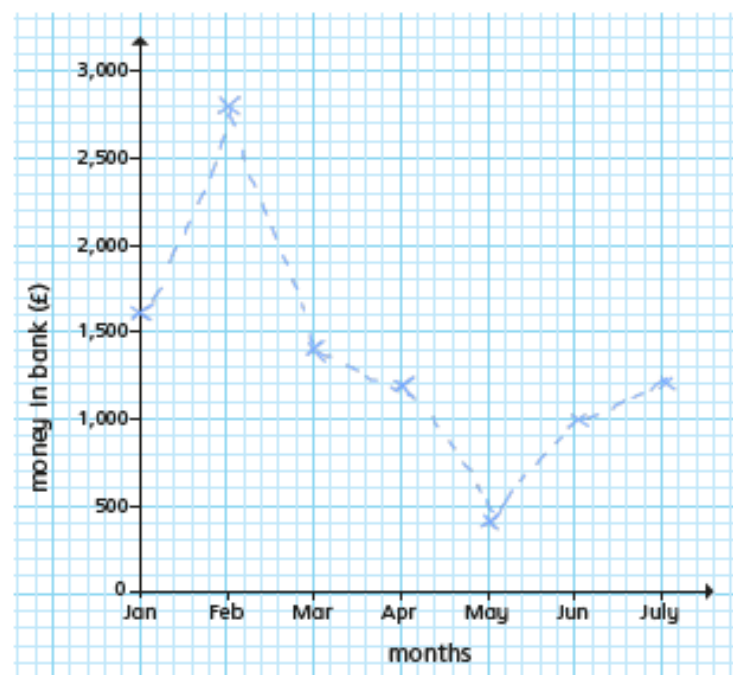
21 °C

d) On which days was it warmer in Cairo than Miami?

1, 2, 5, 7

e) On what day was there the greatest difference in temperature between the two cities?

day 5

4 Use the clues to complete the line graph.

- In February there was £2,800 in the bank, which was the largest overall amount.
- May had the lowest amount.
- In March there was half the amount of February.
- In Jan there was £200 more than March.
- The total of March and April combined was £2,600
- The lowest amount was £2,400 less than the highest amount.
- In July and April there was the same amount of money.
- June = Feb – Mar – May

Compare answers with a partner.