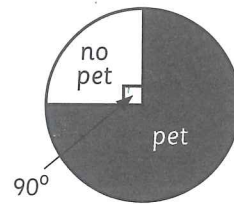# Statistics

A — Pie charts

This pie chart shows that $\frac{1}{4}$ or 25% of the children in a class have no pets.

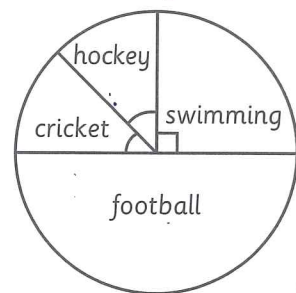The angle you need to show $\frac{1}{4}$ will be $\frac{360}{4}$ = **90°**

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1 The children in Class 6 were asked to choose their favourite sports. The pie chart shows the results.

What percentage of the children chose football? ☐ %

What fraction of the children chose swimming? ☐

What is the angle at the centre of the cricket and hockey sectors if they are both the same size? ☐ °
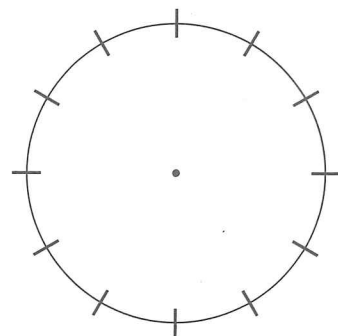

2

Favourite colour	Number of children
Blue	15
Red	5
Yellow	10
Orange	20
Pink	10

60 children were asked to name their favourite colour.

Their answers are shown in this table.
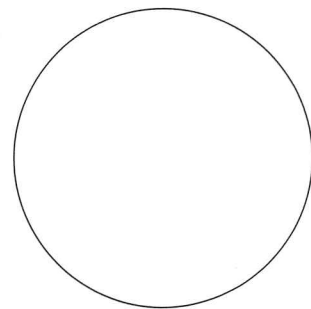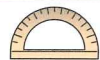
Can you finish the pie chart to show this information?

Hint: Think about a clock!

---

3 The eye colours in Class 6 are shown below:

Colour	Number of children	Angle
Brown	20	
Blue	10	

Let's go!

Work out the angles for each sector and use a protractor to draw a pie chart.

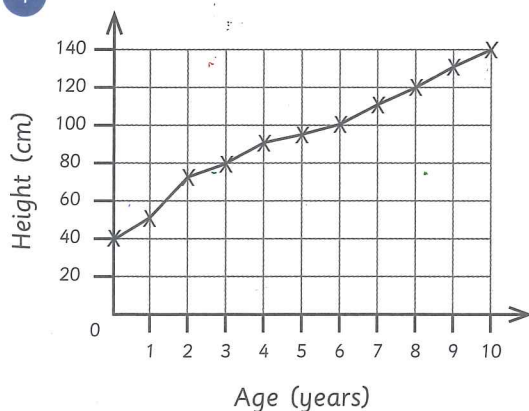I can take information from pie charts and I can make pie charts. I'm confident ☐ I'm nearly there ☐

Line graphs

A line graph is a good way to show how something **changes** as time goes by.

1

This graph shows how Sara's height changed each year from when she was born.

How tall was she when she was 10? [ ] cm

Approximately how tall was she when she was 4? [ ] cm

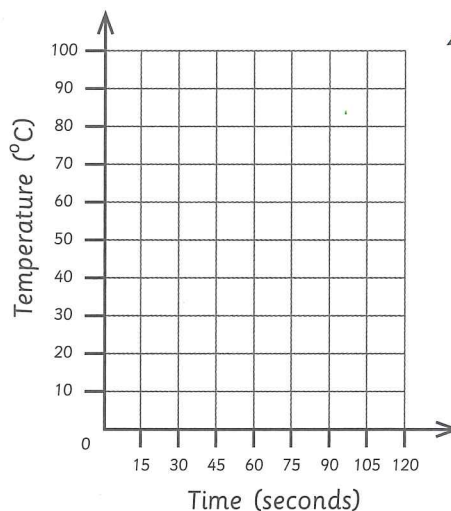By how much did Sara grow from when she was born to when she was 8? [ ] cm
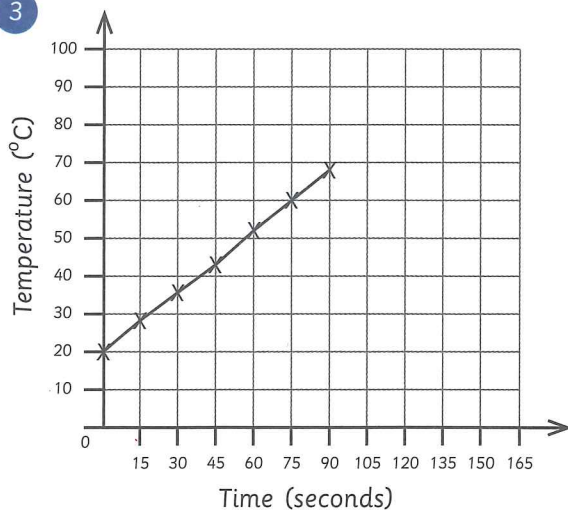
2 Jack heated some water in a pan.

He used a thermometer to measure the temperature of the water every 15 seconds.

Time (secs)	0	15	30	45	60	75	90	105	120
Temp (°C)	20	25	40	55	70	80	90	95	100

Can you plot a graph to show Jack's results?

3

Jill repeated Jack's experiment in question 2, but she ran out of time and had to stop after 90 seconds.

Look at the line graph of her results.

Can you predict how long it would have taken for her water to boil at 100 °C?

[ ] secs

Not again!

I can use line graphs.   I'm confident [ ]   I'm nearly there [ ]

C Averages - the 'mean'

The mean is a type of average. To work out the mean we **add** up all the numbers and then **divide** the total by **how many** numbers there are.

1 Four friends started collecting World Cup cards. Jon had 12, Lucy had 8, Ben had 6 and Sara had 14.

How many cards did they have between them?

[ ]

Complete this to work out the mean number of cards.

mean = total number of cards ÷ number of people

= [ ]   ÷   [ ]   = [ ]

2 Can you find the mean of this group of numbers?

6   8   9   4   7   2

mean = [ ]

3 Can you find the mean of these groups of numbers?

18   20   24   26   32   mean = [ ]

18   20   24   24   24   26   32   mean = [ ]

4 In a café Siân buys 2 cups of tea at £1.20 each, 1 cup of coffee at £1.40 and 2 cups of hot chocolate at £1.60 each.

How many drinks did she buy altogether? [ ]

How much did she spend altogether? £ [ ]

Yes!

What was the average (mean) cost of each drink? £ [ ]
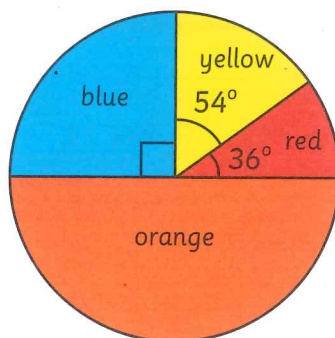
I can calculate the mean of a set of numbers.   I'm confident [ ]   I'm nearly there [ ]
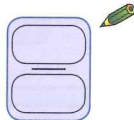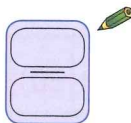
Look at this pie chart which shows the favourite colours of the children in Class 2.
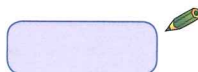
1 What fraction of children chose orange?

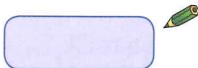2 What fraction of children chose red?

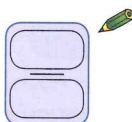3 What percentage of children chose blue?

4 If there were 28 children in the class how many chose either blue or orange?

5 What percentage of children did not choose blue or orange?

6 What fraction of children chose yellow?

7 What percentage of children chose yellow?

Oh!

I can answer word questions about statistics.   I'm confident   I'm nearly there