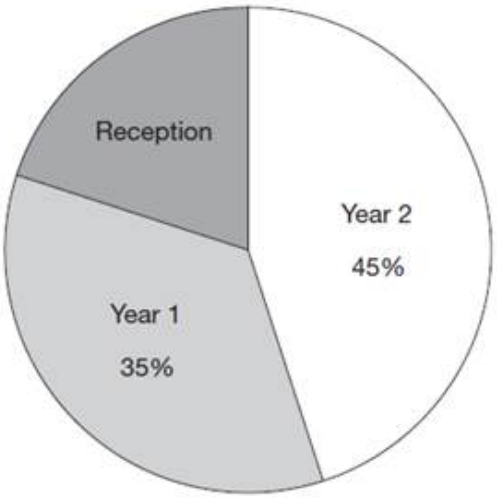
Q1. The pie chart shows the Year groups of children at Woodland Infant School.



There are **56** children in **Year 1**

How many children are there in Reception?

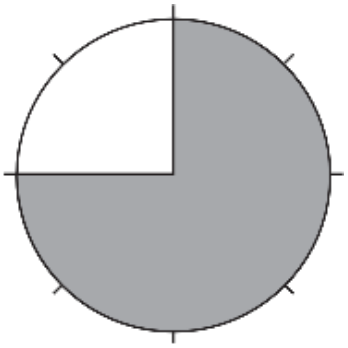
Show your method

children

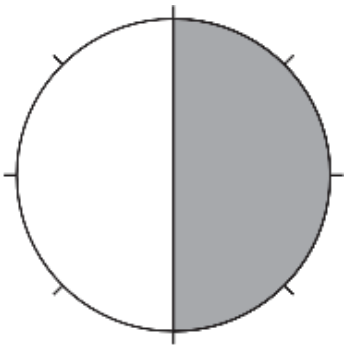
2 marks

Q2. Look at the information in these two pie charts.

Pupils in class 6K

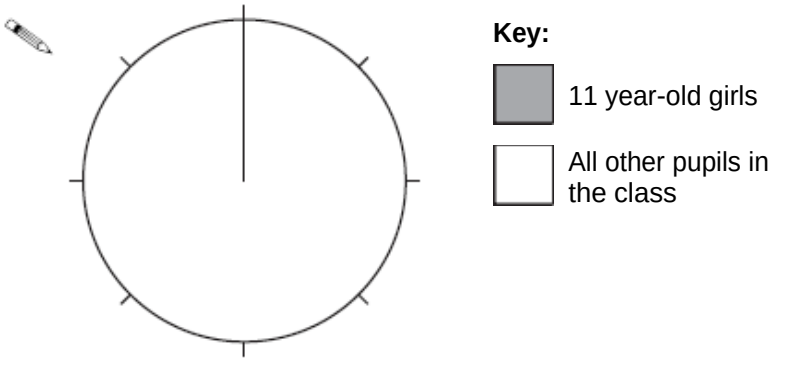


Girls in class 6K



Use the informaion in the two pie charts to complete the pie chart below.

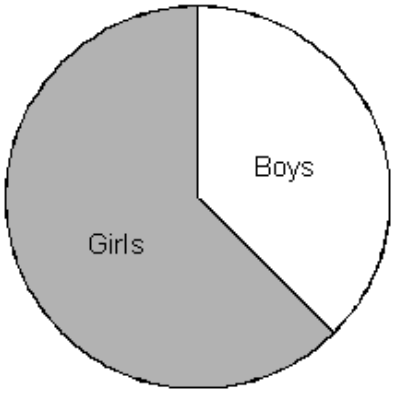
Pupils in class 6K



1 mark

Q3. Sarah makes a pie chart to show the proportion of boys and girls in her class.

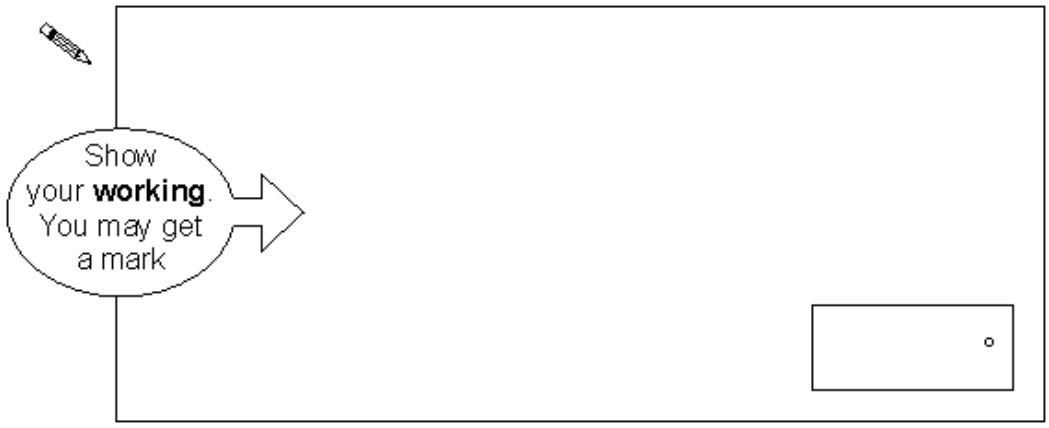
	Number in class	Size of angle on pie chart
Boys	14	144°
Girls	21	216°



The next day another **boy** joins Sarah's class.

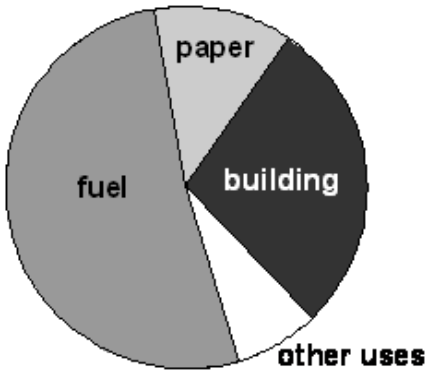
She makes a new pie chart.

Calculate the angle for **boys** on the new pie chart.



2 marks

Q4. This pie chart shows the different ways that wood is used in the world.



Use the pie chart to estimate the **percentage** of wood that is used for **paper**.

%

1 mark

54% of the wood is used for **fuel**.

Calculate the **angle** for the **fuel** sector on the pie chart.

Do not use an angle measurer.

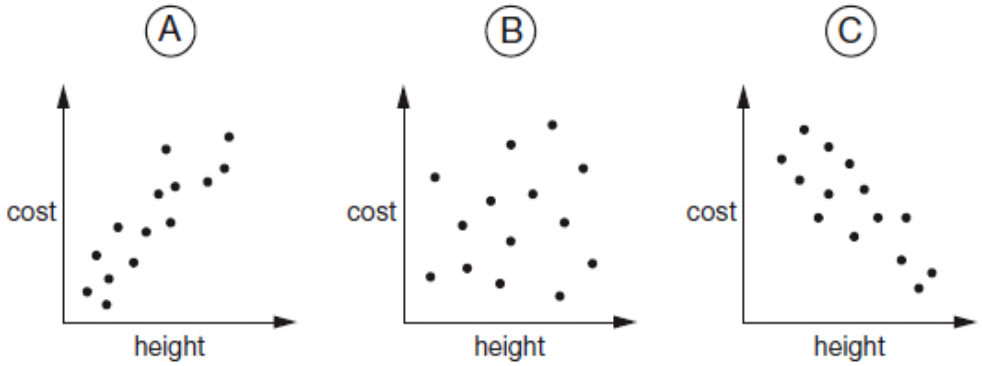
You **must show** how you worked out your answer.

Show your **working**. You may get a mark

°

2 marks

Q5. Here are three scatter graphs showing the heights of people and the cost of clothes.



Chen says,

'The taller you are, the more your clothes cost.'

Megan says,

'The shorter you are, the more your clothes cost.'

Alfie says,

'There is no relationship between your height and what your clothes cost.'

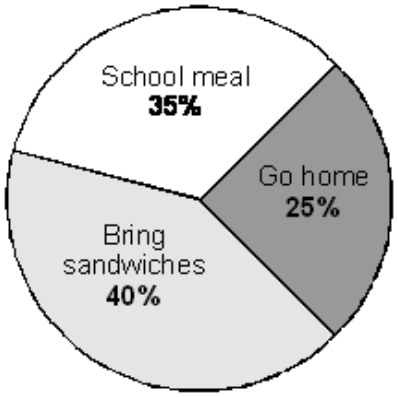
Write the letter of each scatter graph that shows what each person says.

Chen..... Megan ..... Alfie .....

1 mark

Q6.

This pie chart shows the lunch choices of year 6 children at a school.



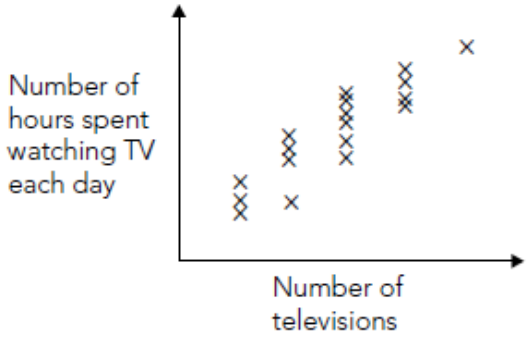
28 children in year 6 have a **school meal**.

How many **go home** for lunch?

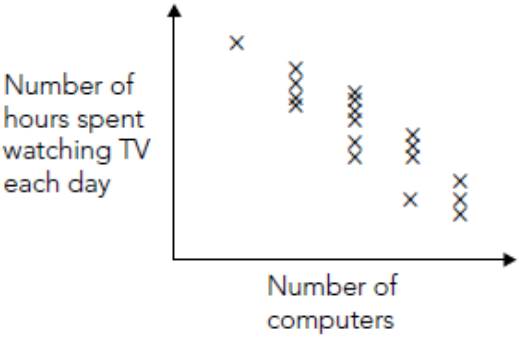
2 marks

Q7. Here are three scatter diagrams, labelled A, B and C.

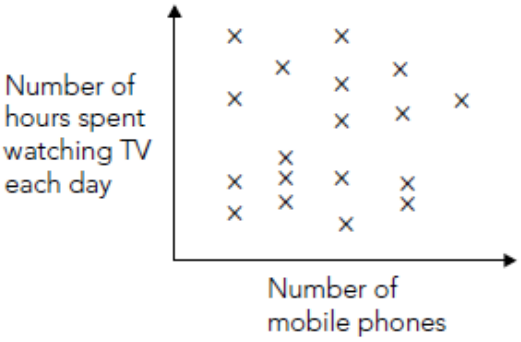
Scatter diagram A



Scatter diagram B



Scatter diagram C



Kemi writes:

Scatter diagram **A** shows that .....**the more televisions a person has in**.....

their home the more hours they spend watching television.....

.....

Now complete the sentences below.

Scatter diagram **B** shows that.....

.....

.....

1 mark

Scatter diagram **C** shows that.....

.....

.....

1 mark

M1. 32

2

or

160 seen *(the total children in the school)*

Do not accept 160° or 160%

OR

Shows or implies a complete, correct method, eg:

- 35 + 45 = 90 *(error)*
  100 − 90 = 10
  56 ÷ 35 = 1.6
  1.6 × 10 = 16

- 35% of children = 56
  total children = 56 × 100 ÷ 35 = 150 *(error)*
  Reception = 100 – (45 + 35)% = 20%
  Reception = 20% of 150
  0.2 × 150 = 40 *(error)*

- 35% is 56
  5% is 8
  20% is 4 × 8 = 24 *(error)*

1

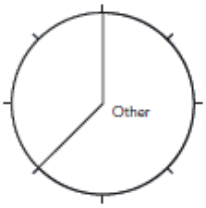
[2]

M2. Divides the pie chart into two correct sectors and shades/labels correctly, eg

-

Accept unambiguous indication of shading/labelling, eg

-



! Given key ignored

Condone incorrect shading provided their labelling is unambiguous

eg, accept

•

! Additional sectors shown

Ignore provided the sector(s) for 11 year-old girls are clearly indicated

eg, accept

•

[1]

M3. Award **TWO** marks for the correct answer of 150°

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg

360 ÷ 36 = 10
15 × 10

Calculation need not be completed for the award of the mark.

Up to 2

[2]

M4. (a) Answer in the range of 10% to 15% inclusive.

1

(b) Award **TWO** marks for the correct answer of 194.4° **OR** 194° **OR** 194.5° **AND** appropriate working, eg:

$$\frac{54}{100} \times 360$$

If the answer is incorrect, award **ONE** mark for evidence of appropriate working.

*Calculation need not be performed for the award of **ONE** mark, but the method shown must be capable of producing the correct answer.*

Up to 2

[3]

-

M5. Identifies all three graphs correctly, ie:

- Chen **A** Megan **C** Alfie **B**

  Accept unambiguous indications of the correct graph for each person, eg:
  - *Names written on scatter graphs*

[1]

M6. Award **TWO** marks for the correct answer of 20

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg

28 = 35% of year 6
4 = 5%, so 25% is 4 × 5

Calculation need not be completed for the award of the mark.

Up to 2

[2]

M7. Gives a correct description for B that shows or implies the link between the two variables

eg

- The more computers a person has in their home, the fewer hours they are likely to spend watching television
- There is negative correlation between the number of hours watched and the number of computers in the home
- If you have lots of computers you don't tend to watch TV much

Accept minimally acceptable description
eg

- *More computers, less watching*
- *Fewer computers, more TV*
- *More television, less computers*
- *LessTV, more computers*
- *Negative correlation*

! Number of hours watching interpreted incorrectly as number of televisions
Condone
eg, for the first mark accept

- *The more computers people have, the fewer TVs they have*

***Do not accept** incomplete description*
eg

- *If you have one computer you watch more TV*

1

Gives a correct description for C that states or implies that the two variables are not linked

eg

- How much television a person watches is independent of the number of mobile phones they have
- There is no correlation between the number of hours watched and the number of phones
- Time watching is not dependent on the amount of mobiles
- People with lots of mobile phones don't necessarily watch any more than those with just one

Accept minimally acceptable description
eg

- *Mobiles don't affect watching*
- *No correlation*
- *Not connected*
- *No relationship*
- *No link*
- *No pattern*
- *It's random*
- *More or less phones won't affect hours*
- *Number of mobiles doesn't affect the situation*
- *Someone watching 1 hour of TV might have as many mobiles as someone who watches 8 hours [generality implied]*
- *How much is watched depends on the person not on their mobile phones*

Do not accept *incomplete description*
eg

- *There is a range of numbers of mobile phones and the number of hours spent watching TV*
- *It doesn't make much difference*

! Description of graph's appearance
Accept alongside a correct response
eg, for C accept

- *It's all spread out so there is no link*

eg, for C do not accept

- *It's all spread out*

1

[2]