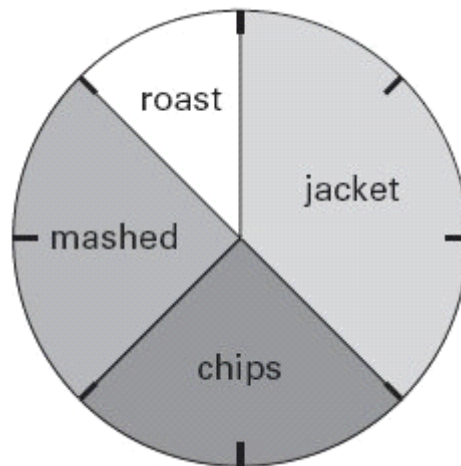


1. This pie chart shows how the children in Class 6 best like their potatoes cooked.



32 children took part in the survey.

Look at the four statements below.

For each statement put a tick (✓) if it is **correct**.

Put a cross (✗) if it is **not correct**.



10 children like chips best.

☐

25% of the children like mashed potatoes best.

☐

1/5 of the children like roast potatoes best.

☐

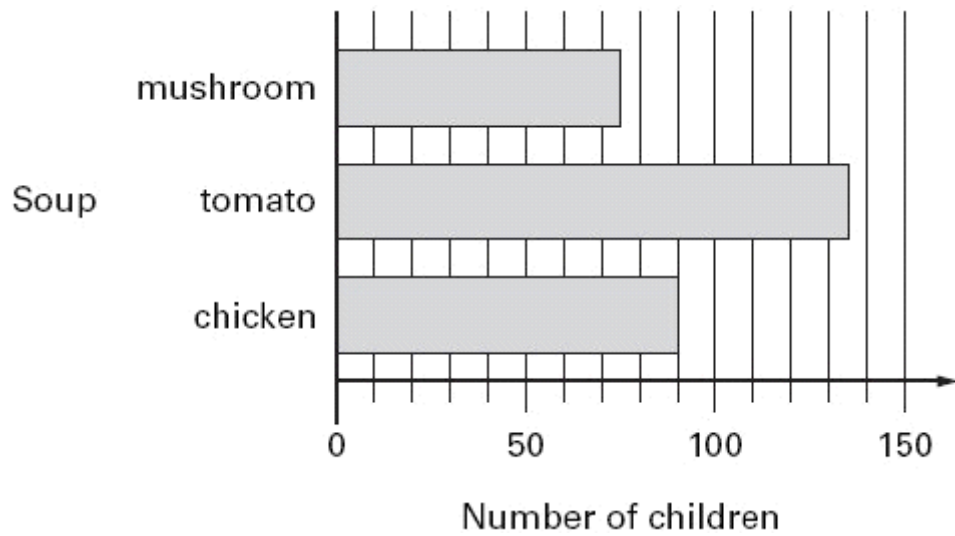
12 children like jacket potatoes best.

☐

2 marks

2. All the children at Park School chose their favourite soup.

The graph shows the results.



How many **more** children chose **chicken** soup than **mushroom** soup?



1 mark

Robbie says,

‘More than half of the children chose tomato soup’.

Is he correct?
Circle Yes or No.



Yes / No

Explain how you can tell from the graph.



.....

.....

.....

1 mark

3. On Monday all the children at Grange School each play one sport.
They choose either hockey or rounders.



There are **103** children altogether in the school.

27 girls choose hockey.

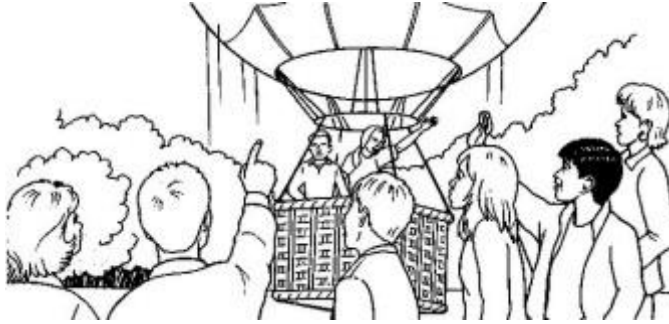
Write all this information in the table.
Then complete the table.



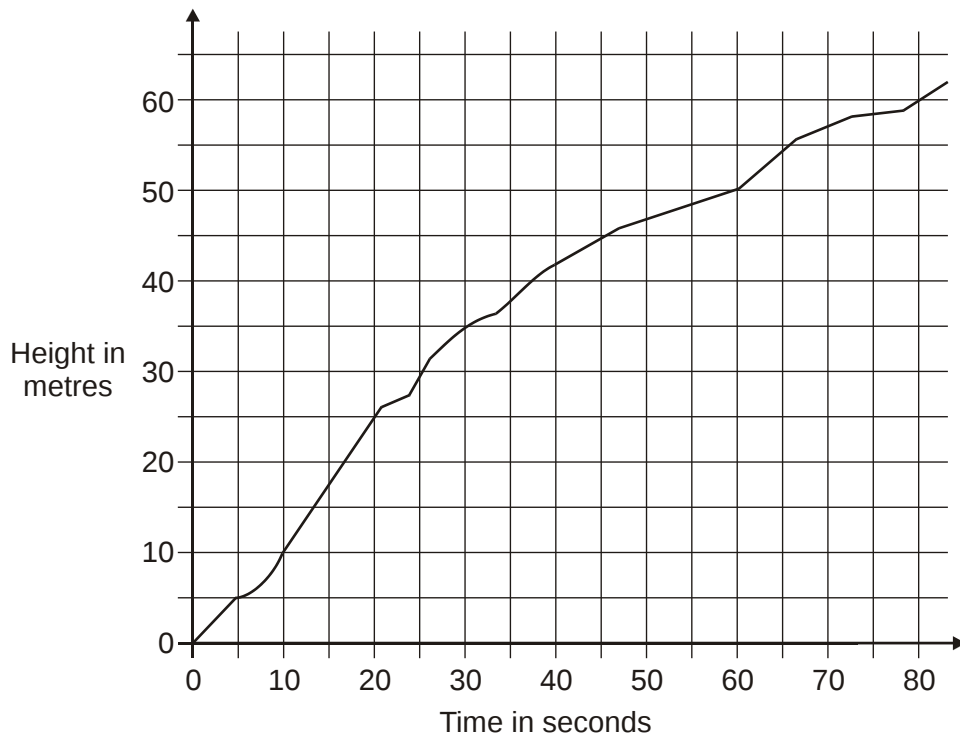
	hockey	rounders	Total
boys	22		
girls			53
Total			

2 marks

4.



This graph shows the height of a balloon at different times.



From the graph, find the height of the balloon at 50 seconds.



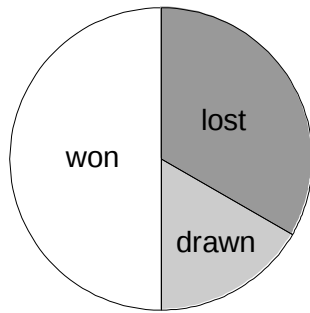
1 mark

Use the graph to find out how long it took the balloon to rise from 30 metres to 60 metres.

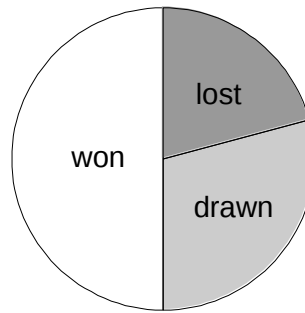


1 mark

5. The pie charts show the results of a school's netball and football matches.



Netball



Football

The netball team played **30** games.

The football team played **24** games.

Estimate the percentage of games that the **netball team lost**.

 %

1 mark

David says,

'The two teams won the same number of games'.

Is he correct?

Circle Yes or No.



Yes / No

Explain how you know.



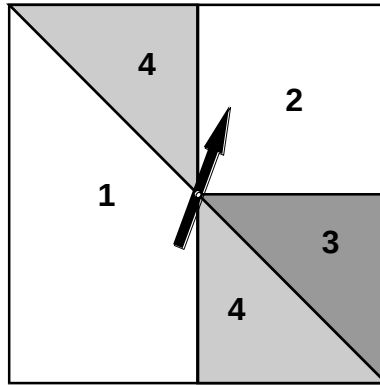
.....

.....

.....

1 mark

6. Here is a square spinner.



Look at these statements.

For each one put a tick (✓) if it is **correct**.
Put a cross (✗) if it is **not correct**.



'4' is the **most likely** score.

☐

'2' and '4' are **equally likely** scores.

☐

Odd and even scores are **equally likely**.

☐

A score of '3' or more is **as likely as** a score of less than '3'.

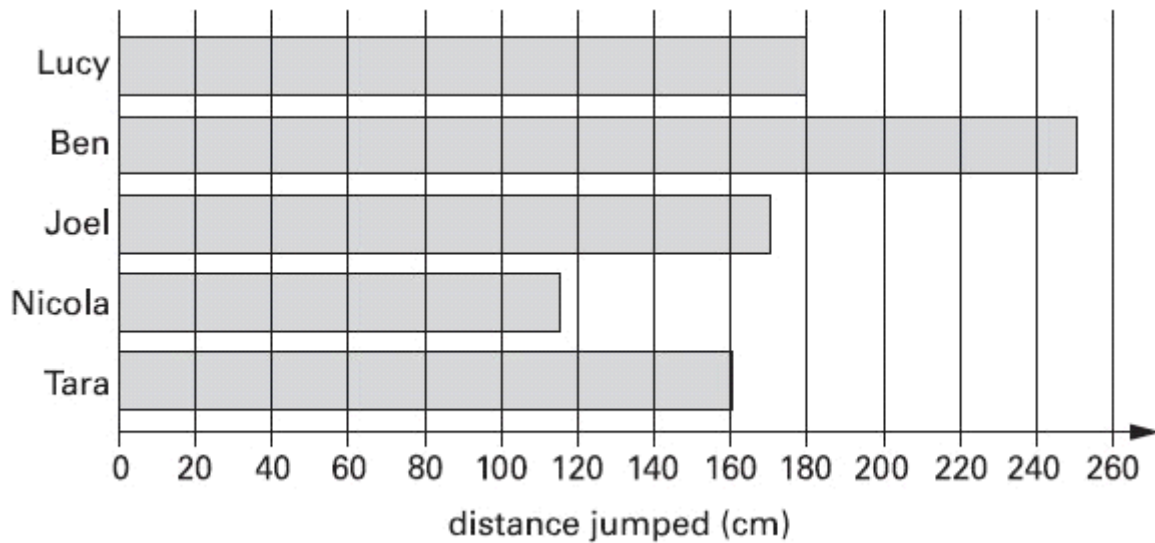
☐

2 marks

7. Some children take part in the long jump.



The graph shows the distances the children jumped.



Estimate how much further Lucy jumped than Nicola.



cm

1 mark

8. Dan has a bag of seven counters numbered **1 to 7**

Abeda has a bag of twenty counters numbered **1 to 20**

Each chooses a counter from their own bag without looking.

For each statement, put a tick (✓) if it is **true**.

Put a cross (X) if it is **not true**.



Dan is **more likely** than Abeda to choose a '**5**'

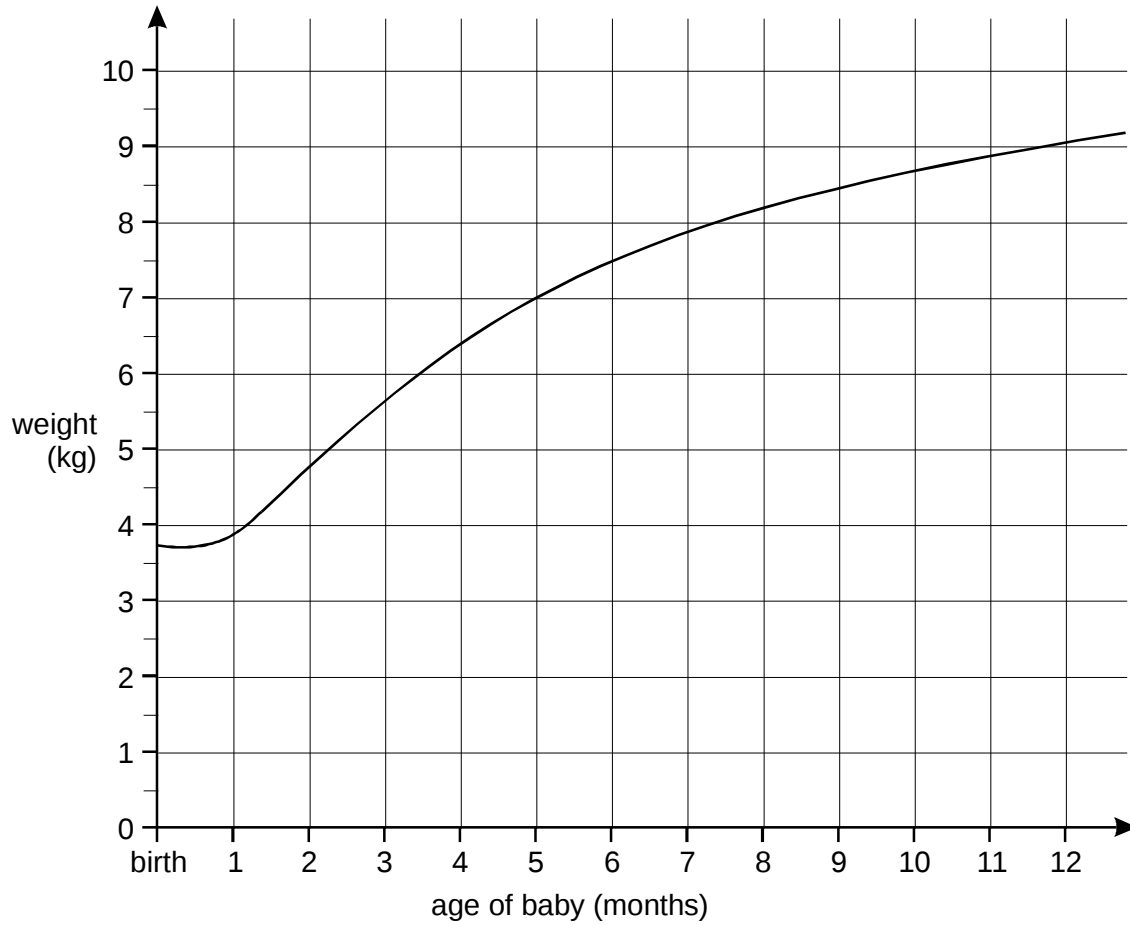
They are both **equally likely** to choose
a number less than 3

Dan is **more likely** than Abeda to choose
an **odd number**.

Abeda is **less likely** than Dan to choose a '**10**'

2 marks

9. This graph shows how the weight of a baby changed over twelve months.



From the graph, what was the weight of the baby at **10 months**?

 kg

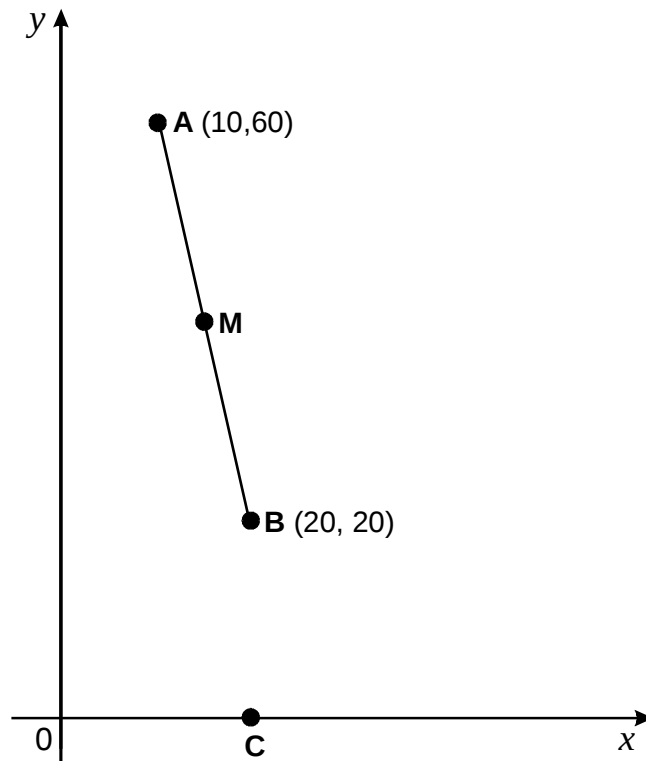
1 mark

How much **more** did the baby weigh at 5 months than at birth?

 kg

1 mark

10.



A is the point **(10, 60)**

B is the point **(20, 20)**

M is the midpoint of line **AB**.

Write the coordinates of **M**.



1 mark

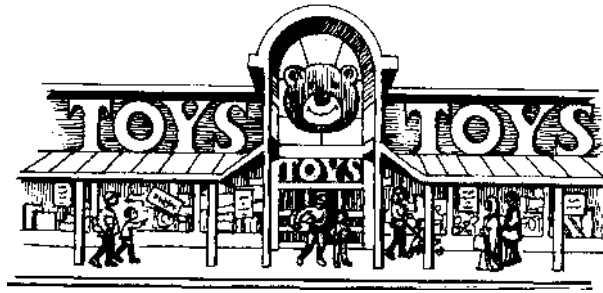
C is on the **x**-axis, directly **below B**.

Write the coordinates of **C**.

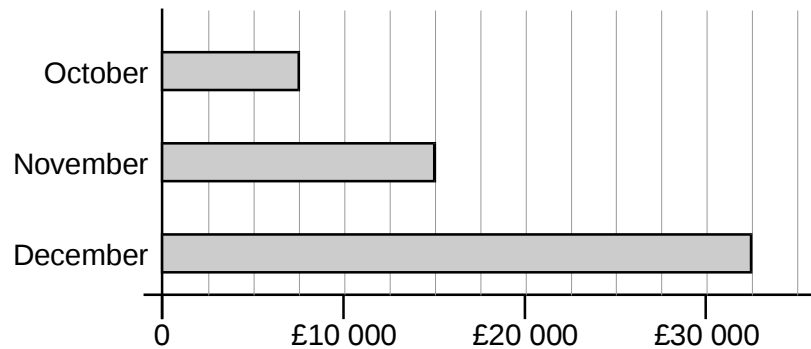


1 mark

11.



This chart shows the amount of money spent in a toy shop in three months.



How much **more** money was spent in the shop in **December** than in **November**?



£

1 mark

Stepan says,

'In November there was a 100% increase on the money spent in October'.

Is he correct?

Circle Yes or No.



Yes /

No

Explain how you can tell from the chart.



.....

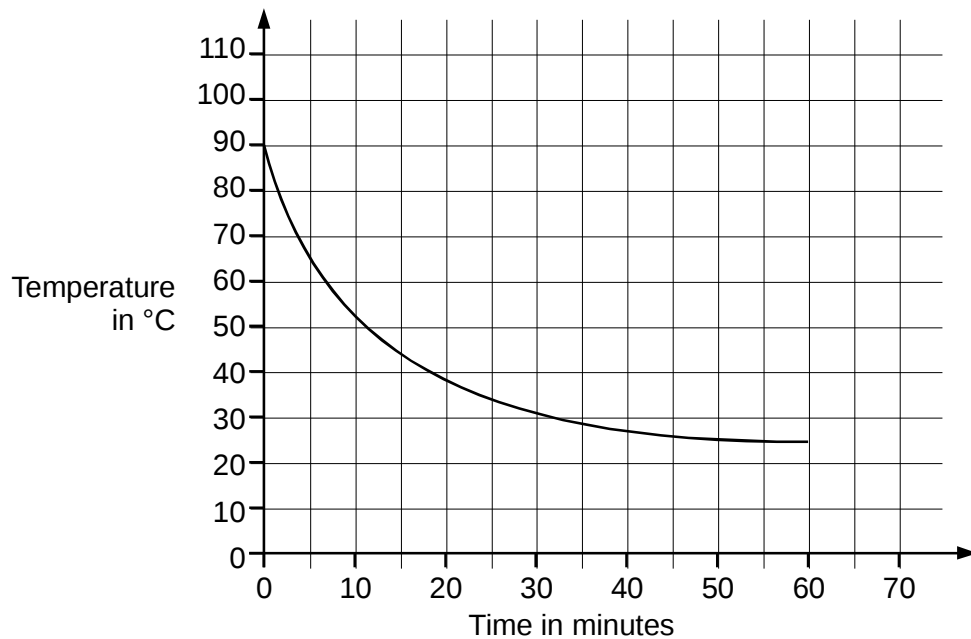
.....

.....

1 mark

12. A hot liquid is left to cool in a science experiment.

This graph shows how the temperature of the liquid changes as it cools.



Read from the graph **how many minutes** it takes for the temperature to reach **40°C**



minutes

1 mark

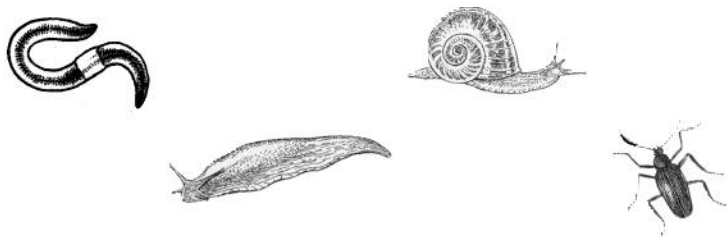
Read from the graph **how many minutes** the temperature is **above 60°C**



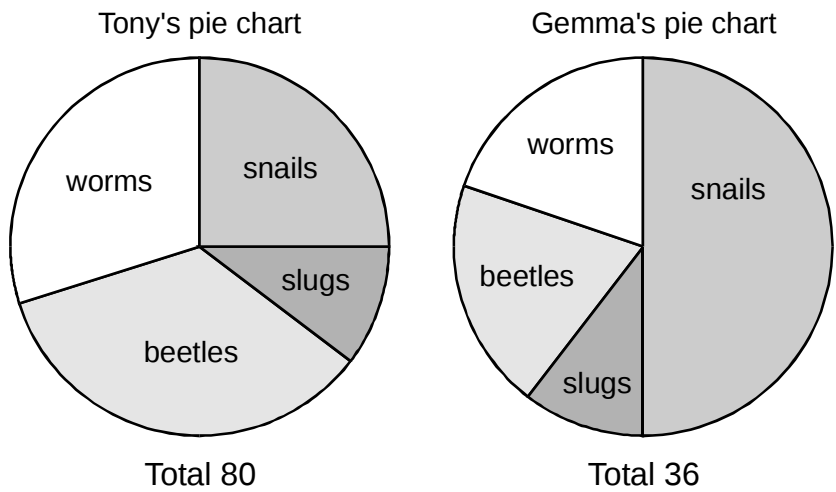
minutes

1 mark

13. Tony and Gemma looked for snails, worms, slugs and beetles in their gardens.



They each made a pie chart of what they found.



Estimate the number of **worms** that **Tony** found.

1 mark

Who found more **snails**?

Circle Tony or Gemma.



Tony / Gemma

Explain how you know.



.....

.....

.....

1 mark

14. *n* stands for a number.

Complete this table of values.



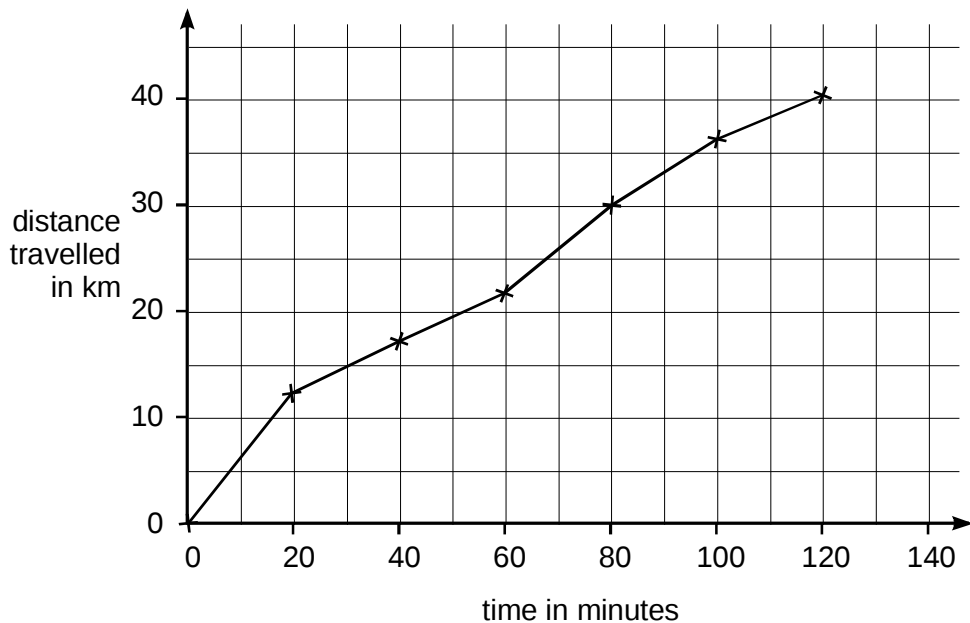
<i>n</i>	$5\,n - 2$
20	
	38

1 mark

1 mark

15. Carol went on a **40-kilometre** cycle ride.

This is a graph of how far she had gone at different times.



How many minutes did Carol take to travel the **last 10 kilometres** of the ride?



minutes

1 mark

Use the graph to estimate the distance travelled in the **first 20 minutes** of the ride.



km

1 mark

Carol says,

'I travelled further in the first hour then in the second hour'.

Explain how the graph shows this.



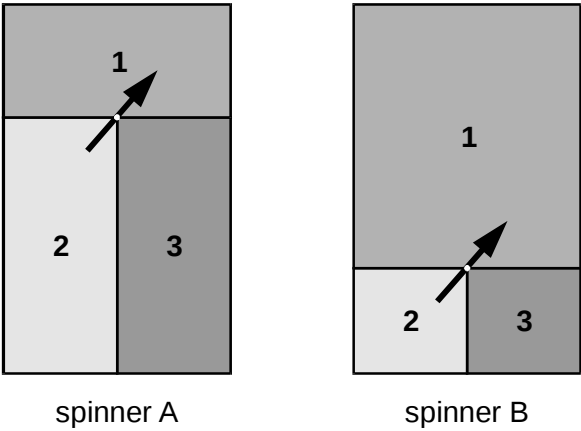
.....

.....

.....

1 mark

16. Katie made two spinners, **A** and **B**.



She says,

'Scoring a 1 on spinner A is just as likely as scoring a 1 on spinner B'.

Explain why Katie is correct.

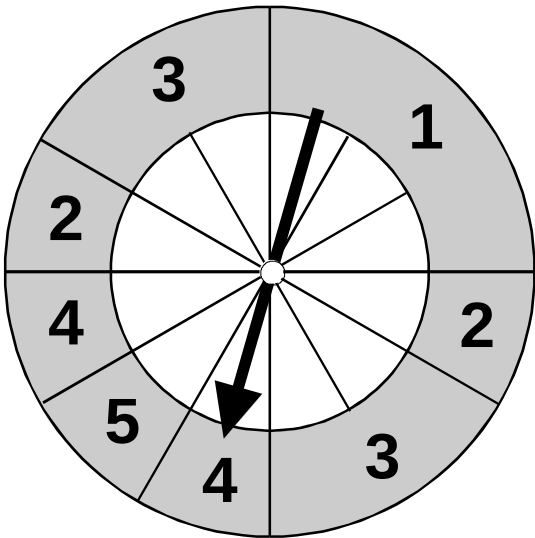


.....

.....

1 mark

17. The outer ring of this spinner has **8 sections** labelled with the numbers **1 to 5**.
The inner ring has **12 equal sections** on it.



Laura spins the pointer.

Which is the pointer **most likely** to stop on?



1 mark

Give a reason for your answer.



.....

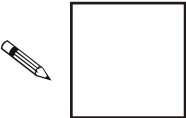
.....

.....

1 mark

What is the probability of getting an **even number** on this spinner?

Give your answer as a fraction.



1 mark

18. Samir spins a **fair** coin and records the results.



In the first four spins '**heads**' comes up each time.

1st spin	2nd spin	3rd spin	4th spin
Head	Head	Head	Head

Samir says,

'A head is more likely than a tail'.

Is he **correct**? Circle Yes or No.



Yes / No

Give a reason for your answer.



.....

.....

.....

1 mark

- 19.** Harry has **six** tins of soup.

The labels have fallen off.

Here are the labels and tins.

Pea Soup

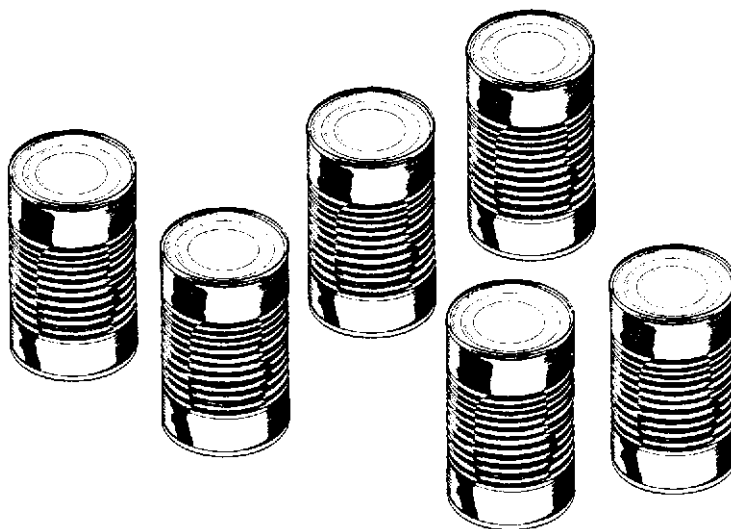
Tomato Soup

Chicken Soup

Pea Soup

Tomato Soup

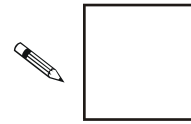
Mushroom Soup



Harry chooses a tin.

What is the **probability** that it is a tin of **Pea Soup**?

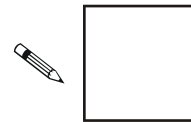
Give your answer as a fraction.



1 mark

What is the **probability** that the tin he chooses is **NOT** a tin of **Tomato Soup**?

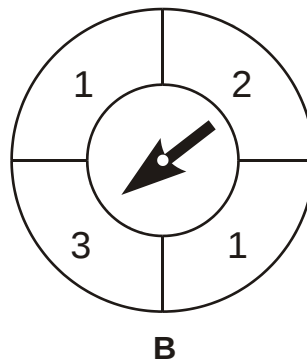
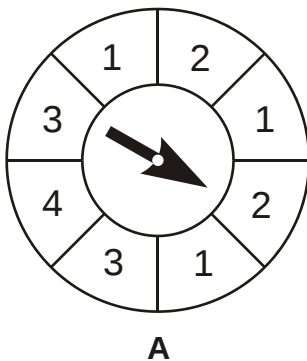
Give your answer as a fraction.



1 mark

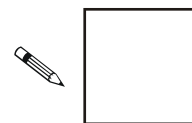
20. When rolling a fair dice numbered one to six, what is the probability of getting an odd number?

21. Lee has two spinners.



What is the probability of spinning a **4** on **spinner A**?

Write your answer as a fraction.



1 mark

On which spinner is he **more likely** to get a **1**?



Give a reason for your answer.



.....

.....

.....

1 mark

Lee says,

'I am equally likely to get a 2 on spinner A as on spinner B'.

Explain why he is correct.



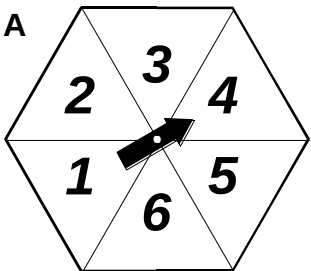
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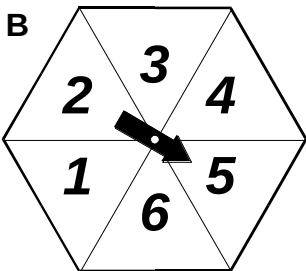
.....

1 mark

22. Megan spins the pointers on these two spinners.
She adds the numbers together to make a **total**.



Total 9



Here is a table to show all the possible totals.

		Number on Spinner B					
		1	2	3	4	5	6
Number on Spinner A	1	2	3	4	5	6	7
	2	3	4	5	6	7	8
	3	4	5	6	7	8	9
	4	5	6	7	8	9	10
	5	6	7	8	9	10	11
	6	7	8	9	10	11	12

Use the table to answer these questions.

What is the **most likely** total?



1 mark

What is the **probability** of getting a total of **1**?



1 mark

The **total 3** and the **total 11** are **equally likely**.

Explain how the table shows this.



.....

.....

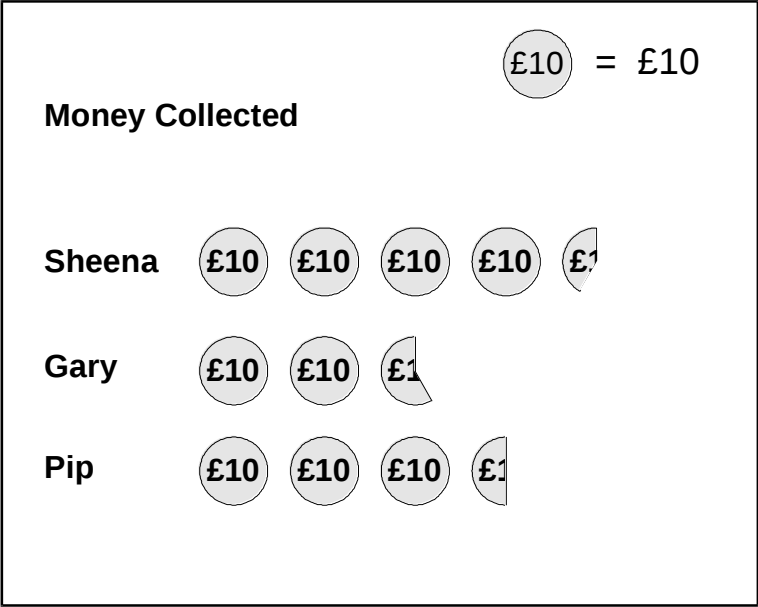
.....

1 mark

23. Three children do a sponsored silence.



This is a chart of the money they collected.



Estimate how much **Sheena** collected.



£

1 mark

Together **Gary** and **Pip** collected **more than £60**.

Explain how the **chart** shows this.



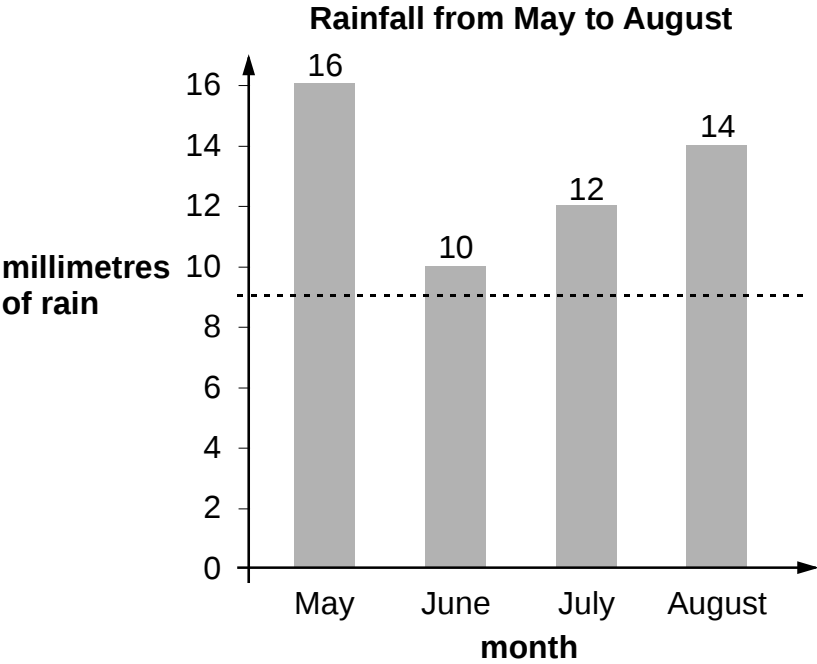
.....

.....

.....

1 mark

24. Here is a bar chart showing rainfall.



Kim draws a dotted line on the bar chart.

She says,

‘The dotted line on the chart shows the mean rainfall for the four months.’

Use the chart to explain why Kim **cannot** be correct.



.....

.....

.....

1 mark

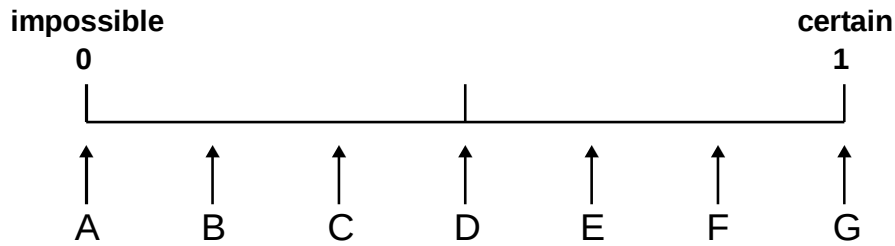
What is the **mean** rainfall for the four months?

 mm

1 mark

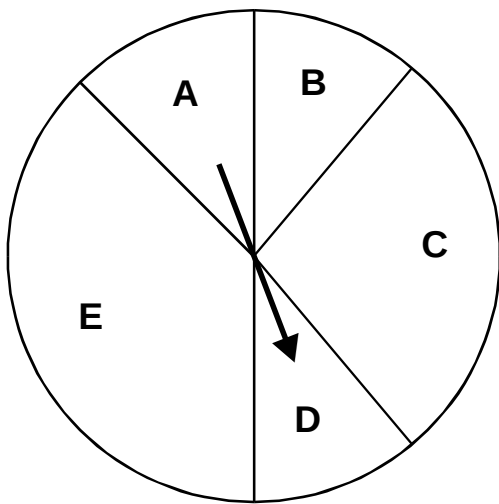
25. A fair dice has the numbers 2, 2, 2, 2, 5 and 5 on it.
The dice is rolled.

Circle the arrow which shows the **probability** of getting a 2.



1 mark

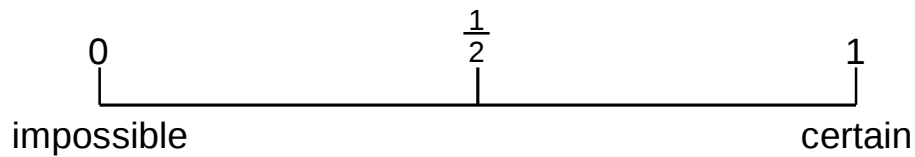
26. Here is a spinner



Anne spins the arrow.

What is the **probability** that the arrow stops in **sector E**?

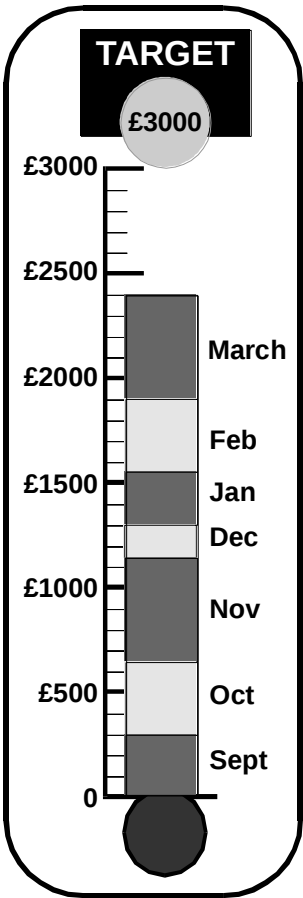
Show this probability by putting a cross (X) on the probability line below.



1 mark

27. A school collects money for charity.

This chart shows how much has been collected.



The target is **£3000**.

Estimate how much **more** money the school needs to reach the target.



£

1 mark

Anil says,

The chart shows that we will reach the target in two months.

Use the chart to explain why Anil may be wrong.



.....

.....

.....

1 mark

28. Write a **different** number in **each** of these boxes so that the **mean** of the **three** numbers is **9**.



--	--	--

1 mark

Write a number in **each** of these boxes so that the **mode** of the **five** numbers is **11**.



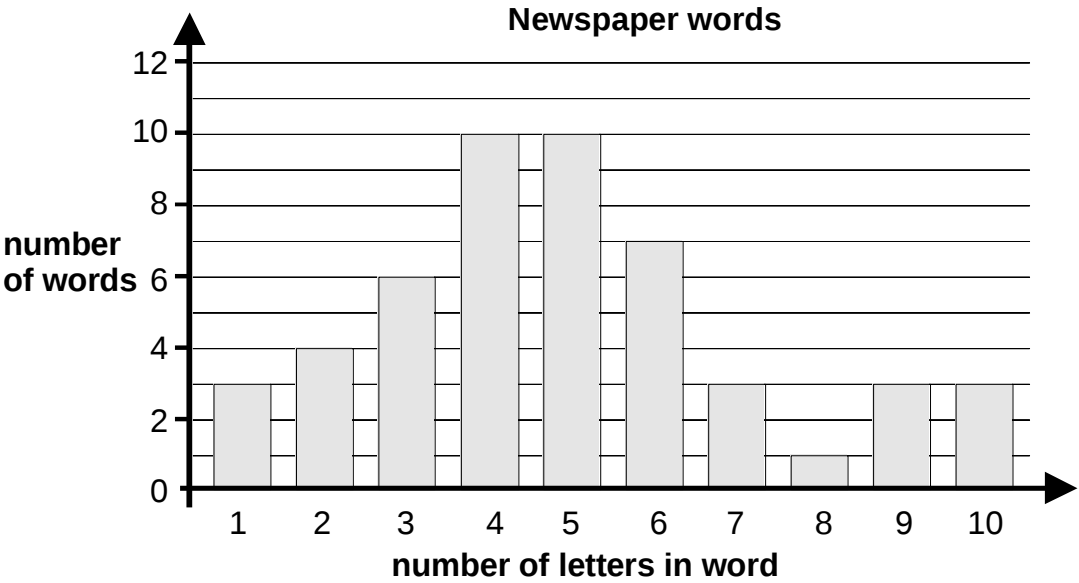
--	--	--	--	--

1 mark

29. Kelly chooses a **section** of a newspaper.

It has **50 words** in it.

She draws a bar chart of the number of letters in each word.



What **fraction** of the 50 words have **more than 6 letters**?



--

1 mark

Kelly says,

23 of the 50 words have less than 5 letters.

This shows that nearly half of all the words used in the newspaper have less than 5 letters in them.

Explain why she **could be wrong**.



.....

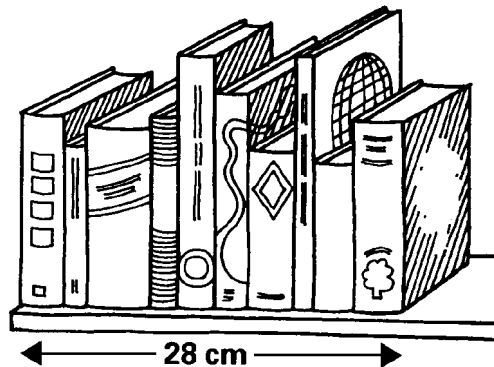
.....

.....

1 mark

30. Vicki puts 10 books on a shelf.

The **10 books** take up **28 centimetres**.



What is the **mean (average)** thickness of her books?



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

cm

2 marks

The shelf is **120 centimetres** long.

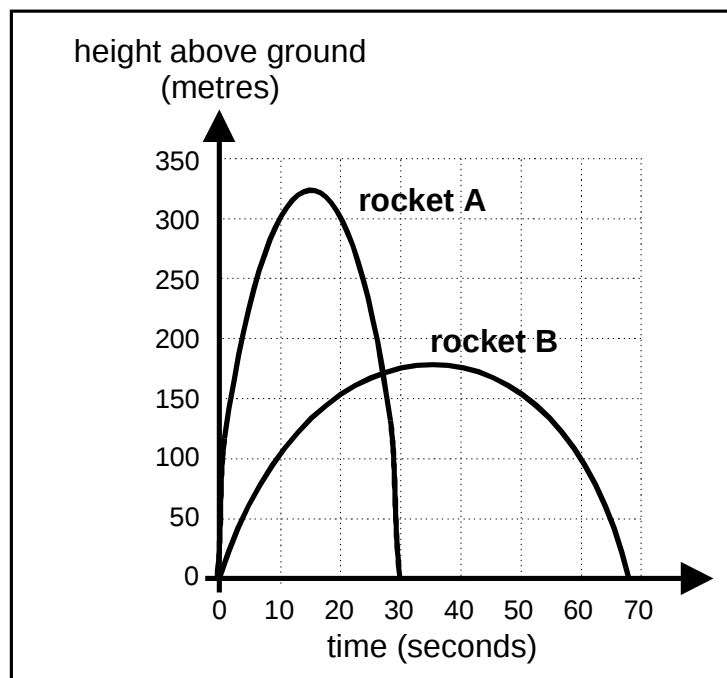
Vicki fills the shelf with a mixture of books like the **first ten books**.

Estimate how many books she can get on the **120 cm shelf**.

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

2 marks

31. Jim draws a graph to show how high two rockets go during their flight.



Estimate **how much higher** rocket A reaches than rocket B.

metres

1 mark

Estimate the **time** after the start when the two rockets are at the **same height**.



seconds

1 mark

Jim says,

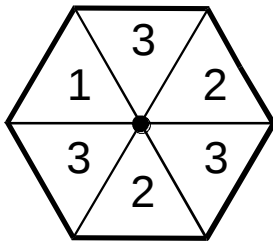
“The graph shows that rocket A was more than 200 m above the ground for about 23 seconds.”

Explain how the graph shows this.

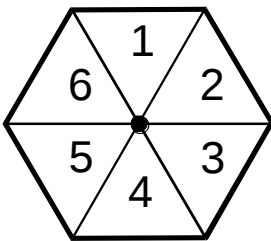


1 mark

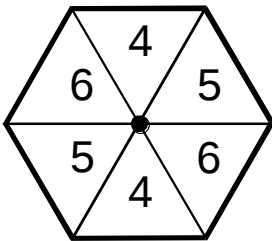
32. Sam has 3 different spinners.



spinner A



spinner B



spinner C

He chooses **ONE** of his spinners.
He spins it **100** times and writes down how it lands each time.
The results of the 100 spins are numbers only from 1 to 3.

Which spinner do you think he is using?



Spinner

Give **ONE** reason why you chose this one.



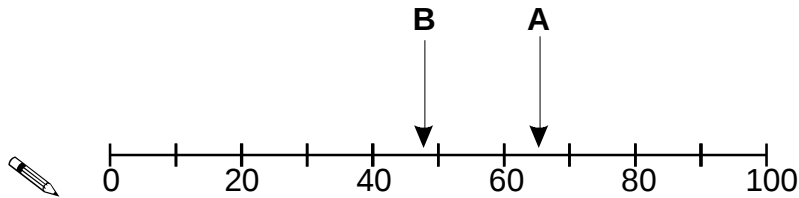
1 mark

Sam spins **A** 100 times and **B** 100 times.

The arrows on the line show how many times each spinner lands on an **odd number**.

He spins **C** 100 times.

Put an arrow on the line to show your estimate of how many times spinner **C** will land on an **odd number**.

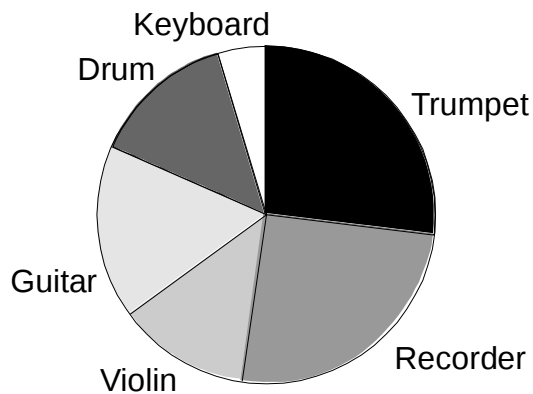


1 mark

Show how you worked out your estimate.

1 mark

33. The Year 6 children in a school were asked to choose a musical instrument. This is a pie chart of their choices.



Estimate what **fraction** of the children chose a **drum**.



1 mark

There are **80** children in Year 6.

Estimate the number of children who chose a **violin**.



1 mark

Explain how you decided.



1 mark

15% of the 80 children chose a **guitar**.

How many children is this?



2 marks

34. Kim wants to **estimate** the probability that her friend Tony will answer the phone when she rings the house.

Here are two ways she could do it.

A There are four people in the house, so there is a probability of 1 out of 4 it will be Tony.

B The last time Kim rang, Tony answered, so it won't be Tony this time.

Kim says **A** is **not** a good way to estimate the probability.

Explain why not.



.....

.....

.....

1 mark

She also says **B** is **not** a good way to estimate the probability.

Explain why not.



.....

.....

.....

1 mark

35. Rob runs 100 metres ten times.
These are his times in seconds.

13.4	13.0	13.9	13.7	13.3
13.5	14.0	14.4	13.8	14.0



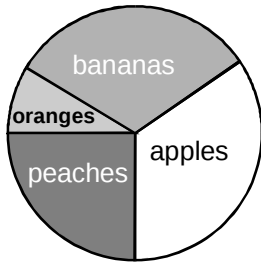
What is his **mean** (average) time?



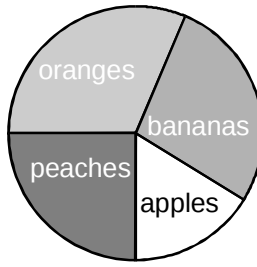
seconds

1 mark

36. Some children work out how much money two shopkeepers get from selling fruit. They use pie charts to show this.



Mrs Binns



Mr Adams

Mrs Binns gets **£350** selling **bananas**.

Estimate how much she gets selling **oranges**.



£

1 mark

Mrs Binns gets a total of £1000 and Mr Adams gets a total of £800.

Estimate how much **more** Mrs Binns gets than Mr Adams for selling **peaches**.



£

1 mark