Megan goes on a walking holiday for five days.

The table shows how far she walked on the first four days.

Monday	Tuesday	Wednesday	Thursday
14km	23km	13km	13km

Megan says,

> 'My average for the first four days is more than 15km.'

Explain why Megan is **correct**.

1 mark

Friday is her last day.

She wants to increase her average to **17km**.

How many kilometres must she walk on Friday?

Show your method

km

2 marks

Here are four numbers.

Their **mean** is 4 and their **range** is 0

| 4 | 4 | 4 | 4 |

Write four numbers that have a **mean** of 4 and a **range** of 4

A, B and C stand for three different numbers.

The mean of A and B is 40

The mean of B and C is 35

A + B + C = 100
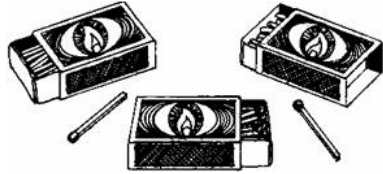
Calculate the values of **A**, **B** and **C**.

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

A =   B =   C =

2 marks

Carol counts the matches in **10** boxes.

She works out that the **mean** number of matches in a box is **51**

Here are her results for **9 boxes**.

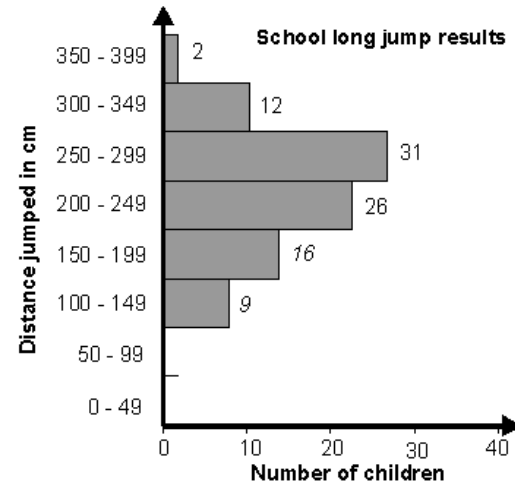| Number of matches in a box						
48	49	50	51	52	53	54
	✓	✓	✓	✓		✓
	✓	✓				✓
	✓					

Calculate how many matches are in the **10th box**.

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

2 marks

Here are the long jump **results** for a school.

They are measured to the **nearest centimetre.**

School long jump results

Steve jumped **315cm**.

He says,

'Only 2 people jumped further than me.'

Could he be correct? Circle **Yes** or **No**.

Yes / No

Explain your answer.

....

....

....

(a) Gives a correct explanation, eg:

- Her average is 15.75

- $14 + 23 + 13 + 13 = 63$
  $63 \div 4$ is more than 15

- If the average is 15, Monday Wednesday and Thursday total 5 below and Tuesday is 8 above so the average must be > 15

- To walk an average of 15 km a day you need to have walked 60 km. Megan has walked 63 km so she is over the average of 15 km

  Accept minimally acceptable explanation, eg:
  - *$63 \div 4$*
  - *$63 \div 4 = 16$*
  - *$63 \div 4 = 15\ r\ 3$*

  ***Do not accept** incomplete or incorrect explanation, eg:*
  - *If you add up how far she walked in four days and divide by 4, it's more than 15*
  - *$14 + 23 + 13 + 13 = 63$*
  - *$63 \div 4 = 15$*

  1

(b) 22

! Follow-through of incorrect total or average
*For 2m or 1m, accept follow-through from incorrect value for the average **or** the*

total calculated for part (a) used correctly in part (b), eg:
- *for 16 as answer in part (a), award 2 marks for $85 - 4 \times 16 = 21$*

  2

or

85 seen (*the total for 5 days*)

! Correct embedded solutions
Award 1m, for a response which shows 22 as the embedded solution to their working

OR

Shows or implies a complete correct method, eg:

- $(17 \times 5) - 14 - 23 - 13 - 13$

- $17 \times 5 = 80$ (*error*)
  $80 - 63$

  1

Award **TWO** marks for the correct answer as shown:

A = 30   B = 50   C = 20

All three numbers must be correct for the award of the mark.

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

A + B = 80

B + C = 70

A + 2B + C = 150

100 + B = 150

*Accept for **ONE** mark the
correct three numbers but
written in the incorrect boxes.*

Up to 2

[2]

Award **TWO** marks for the correct answer of 52

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

51 × 10 = 510

so number of matches =

510 – ((49 × 3) + (50 × 2) + (54 × 2) + 51 + 52)

*The calculation need not
be completed for the
award of the mark.*

Up to 2

[2]

(a)   Yes **AND** appropriate supporting reason, eg:
• 'Steve's jump could have been the largest in the 300–349 category'
• 'Maybe nobody got more than him in his group'
*If the child has not indicated 'yes' award one mark, only if the
explanation makes clear why the answer is 'yes' or why he
could be correct.*
***Do not** accept a correct explanation if 'no' has been clearly
indicated.*
***Do not** accept vague or arbitrary reasons, eg:*
'He might be a good jumper';
'It was a good day for him'.

1

(b)   Evidence of awareness that the median is the middle
value of
the whole set of results, eg:

• 'The median is in the 200–249cm group'

• 'More than half were less than 250'

• 'The middle is in the 200–249 set'

• 'More than half of the results are below 275cm'

***Do not** accept vague or
arbitrary reasons, eg:*
*'The graph only shows
groups';*
'275 isn't in the middle group'.

1

[2]