1

[Extra]

Here are **three** numbers.

| 4 | 8 | 9 |

Show that the mean of these numbers is 7

[2 marks]

2

[Extra]

Here are **three** numbers.

| 7 | 8 | 3 |

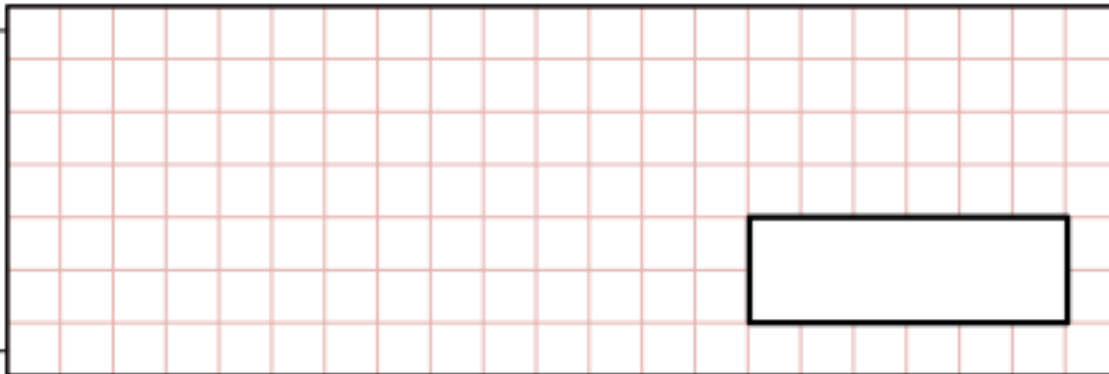Work out the mean of these numbers.

Show your method

[2 marks]

Seven children measured their heights.

Children	Height (cm)
Stefan	144
Lara	136
Olivia	142
Chen	143
Maria	152
Dev	148
Sarah	150

What is the mean height of the children?

Show your method

[2 marks]
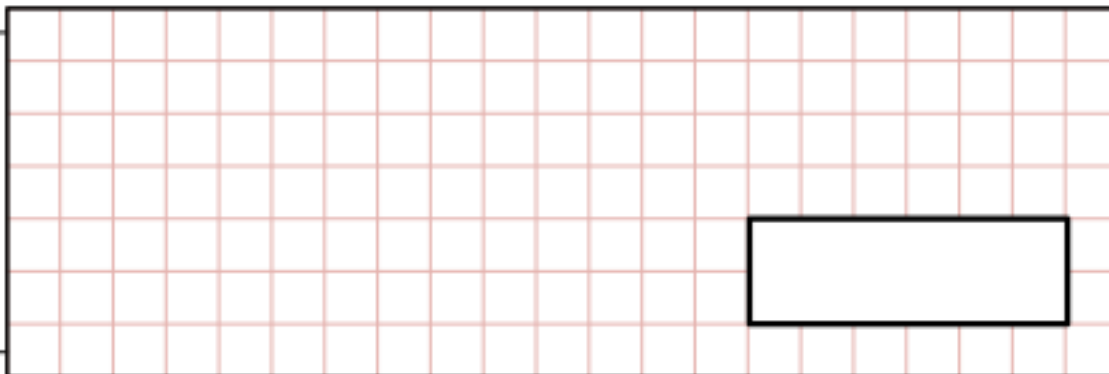
Two numbers have a mean of 12

One of the numbers is 9

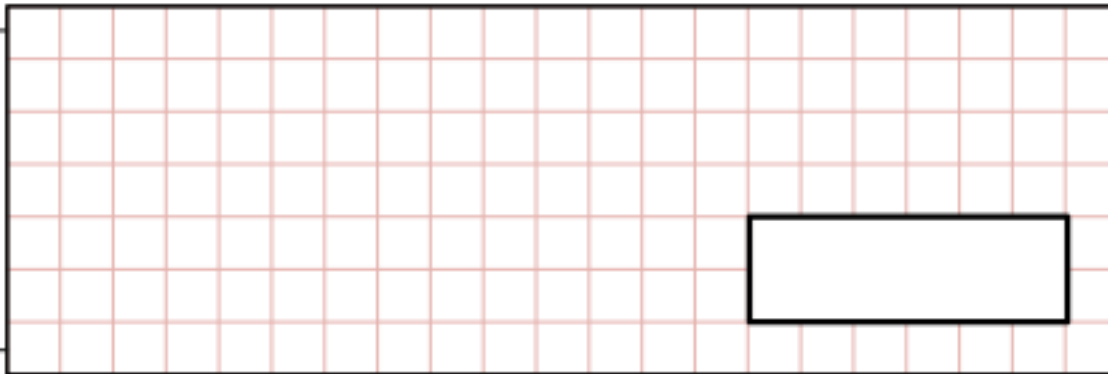What is the other number?

Show your method

[2 marks]

5

Three numbers have a mean of 13

Two of the numbers are 8 and 12

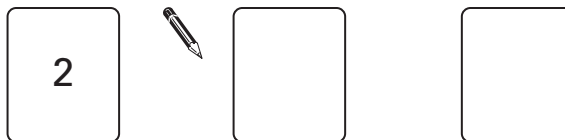What is the other number?

Show your method

[2 marks]

6

The **mean** of three numbers is **5**

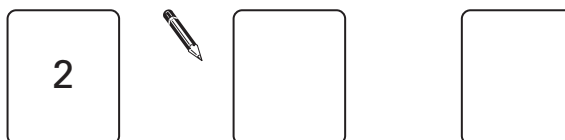One of these numbers is 2

What could the other numbers be?

Write them on the cards below.

2

What else could the numbers be?

Use **different numbers** from your answer above.

Write them on the cards below.

2

[2 marks]

Hanif asked ten people:

'What is your favourite sport?'

Here are his results.

football	*cricket*	*football*	*hockey*	*swimming*
hockey	*swimming*	*football*	*netball*	*football*

Is it possible to work out the **mean** of these results?

☐ Yes   ☐ No

Explain how you know.

[1 mark]

Three positive whole numbers are all different.

The mean of the numbers is 4

One of the numbers is 5

Find the other two numbers.

Show your method

[2 marks]

9

Four numbers have a mean of 24

Three of the numbers are 22, 36 and 9

What is the other number?

Show your method

[2 marks]

10

Four numbers have a mean of 17

One of the numbers is 8.

The other three numbers are the same. What are they?

Show your method

[2 marks]

11

The mean age, in years, of Ahmed, George and Chloe is 21

The mean age, in years, of Ahmed and George is 19

Work out Chloe's age.

Show your method

[2 marks]

12

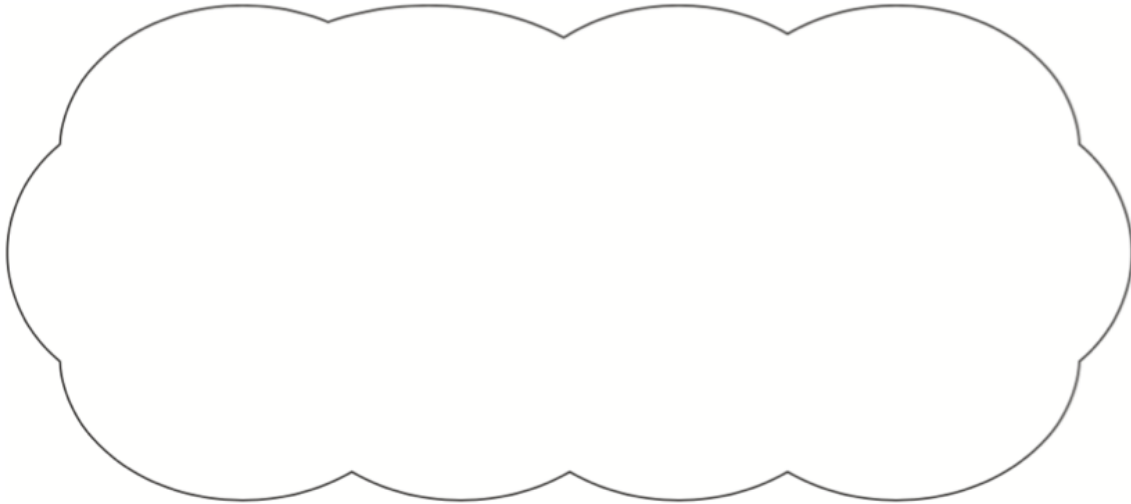A person must be 1.40 metres, or taller, to ride on Nemesis in Alton Towers.

The mean (average) height of Tommy and his friends is 1.50 metres.

Tommy says

"We are all allowed to ride on Nemesis"

Explain why Tommy might be wrong.

[1 mark]
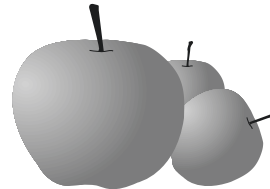
13

Three apples have a **mean** (average) mass of 100 grams.
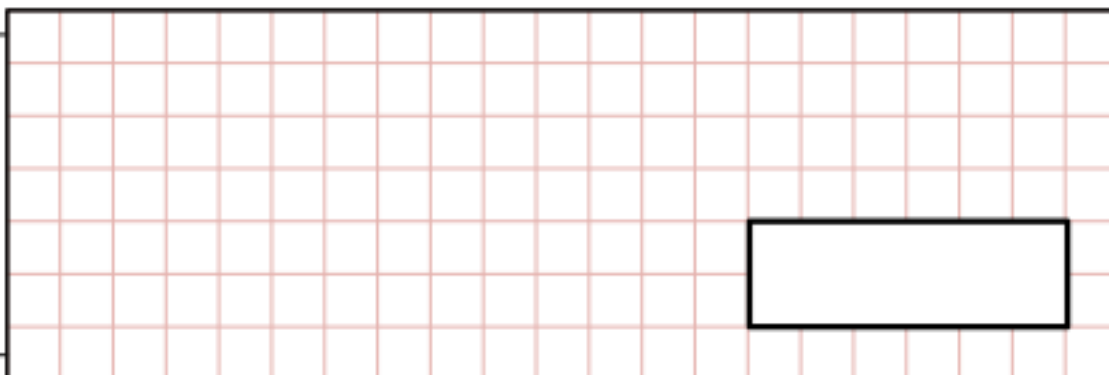
The largest apple is removed.

The **mean** mass of the remaining two apples is 70 grams.

What is the mass of the largest apple?

Show your method

[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 method

[2 marks]

15

[Extra]

Five numbers have a **mean of 6**

Four of the numbers are shown:

9 7 4 7

Work out the value of the missing number.

Show your method

[2 marks]

16

[Extra]

The mean height of a group of 4 girls is 164 cm.

What is the total height of the 4 girls?

cm

Anika joins the group and the mean height of the 5 girls is 166 cm.

How tall is Anika?

Show your method

[3 marks]
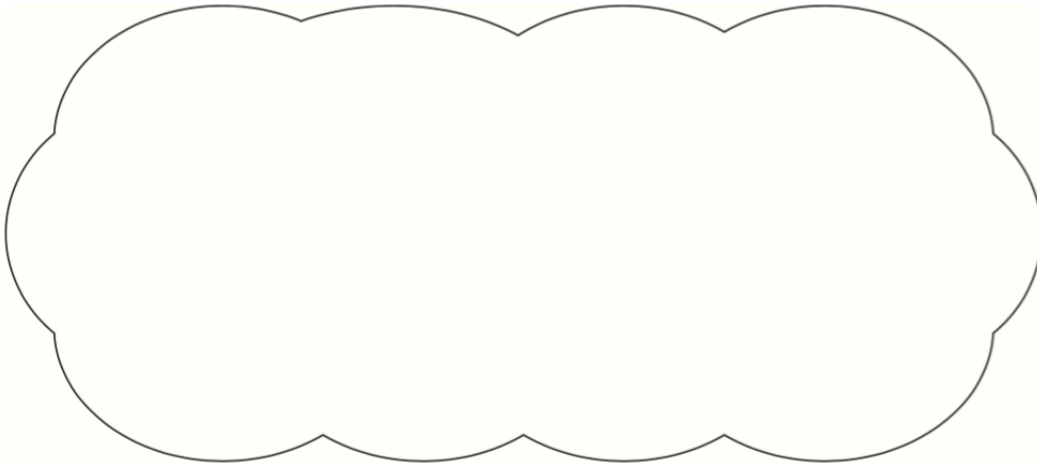
17

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.'
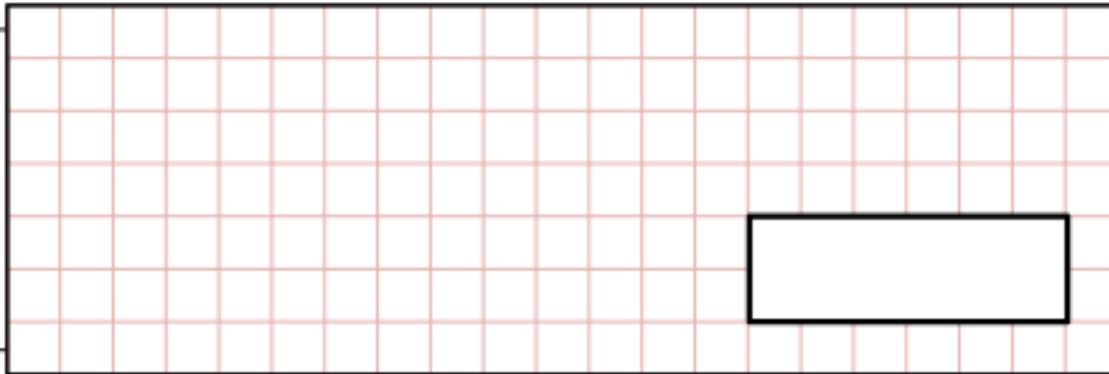
Explain why Megan is **correct**.

Friday is her last day.

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

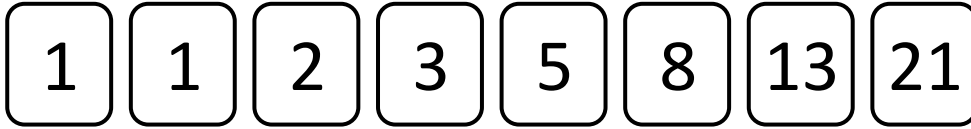How many kilometres must she walk on Friday?

Show your method

[3 marks]

18

[Extra]

Here are some cards with numbers on them.

$$\boxed{1} \quad \boxed{1} \quad \boxed{2} \quad \boxed{3} \quad \boxed{5} \quad \boxed{8} \quad \boxed{13} \quad \boxed{21}$$

Choose **three** numbers which have a mean of **4**

_____ , _____ and _____

Choose **four** numbers which have a mean of **4**

_____ , _____ , _____ and _____

Choose **five** numbers which have a mean of **4**

_____ , _____ , _____ , _____ and _____

[3 marks]

19
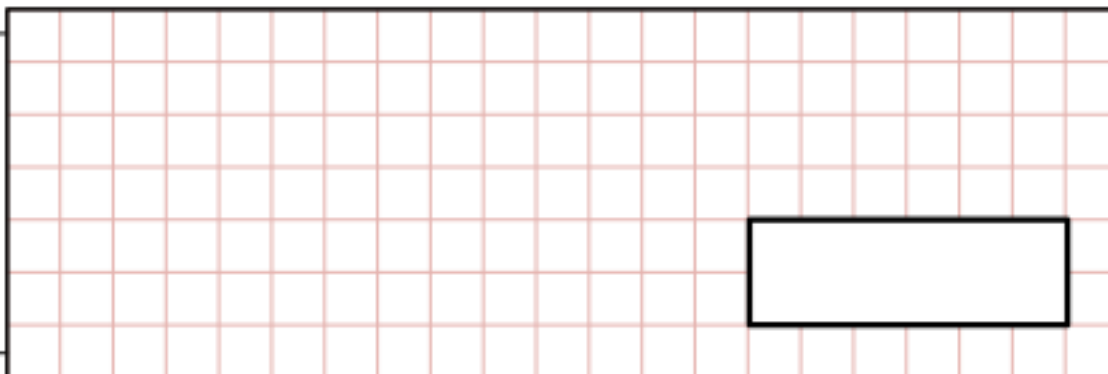
[2002]

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 method

[2 marks]

20

[Extra]

Set A has 3 numbers with a mean of 10

Set B has 5 numbers with a mean of 18

The two sets are combined.

What is the mean of all 8 numbers?

Show your method

[2 marks]

21

[Extra]

The mean height of a group of 5 children is 164 cm.

One child, whose height is 156 cm, leaves the group.

Find the mean height of the remaining 4 children.

Show your method

[2 marks]

22

[Extra]

After 4 tests, Zoe's mean mark is 66%

Zoe takes another test.

What score must Zoe get to increase her mean score in all 5 tests to 70%?

Show your method

[2 marks]

Altogether, I have **10** bags of sweets.

The **mean** number of sweets in the bags is **41**

The table shows how many sweets there are in **9** of the bags.

Number of sweets in a bag	Frequency
39	3
40	2
41	1
42	1
43	0
44	2

Calculate how many sweets there are in the 10th bag.

Show your method

[2 marks]