Lancashire Curriculum Tests

Year 6 – End of Spring Term

(On track to meet end of year expectations)

Mathematics

Paper 2: reasoning

First name	
Middle name	
Last name	

Total marks	

Lancashire County Council

Instructions

You **may not** use a calculator to answer any questions in this test.

Questions and answers

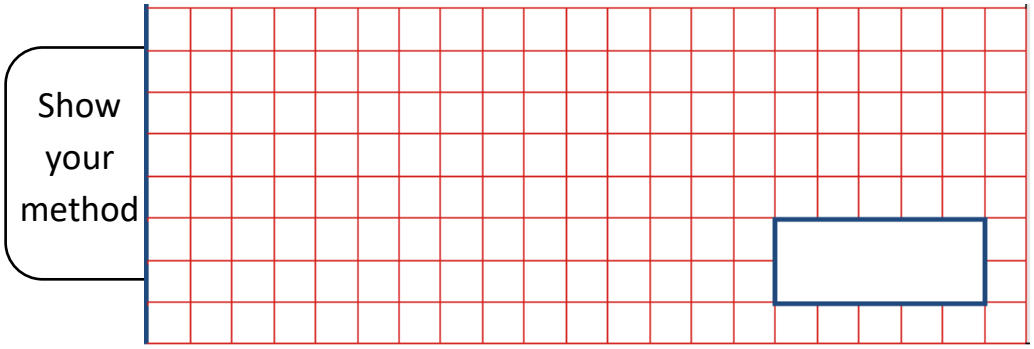
You have **40 minutes** to complete this test.

Follow the instructions for each question.

Work as quickly and as carefully as you can.

If you need to do any working out, you can use the space around the question.

Some question have a method box like this:



For these questions, you may get a mark for showing your method.

If you cannot do one of the questions, **go on to the next one**.
You can come back to it later if you have time.

If you finish before the end, **go back and check your work**.

Marks

The number under each line at the side of the page tells you the maximum number of marks available for each question.

1 Write the missing numbers in these sequences.

☐ 98,700 98,800 98,900 ☐

☐

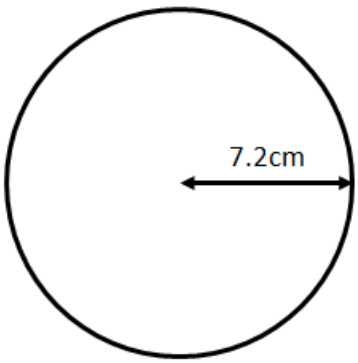
1 mark

1 3 6 10 15 ☐

☐

1 mark

2 This circle has a **radius** of 7.2cm



Not actual size

What is the **diameter** of the circle?

☐ **cm**

☐

1 mark

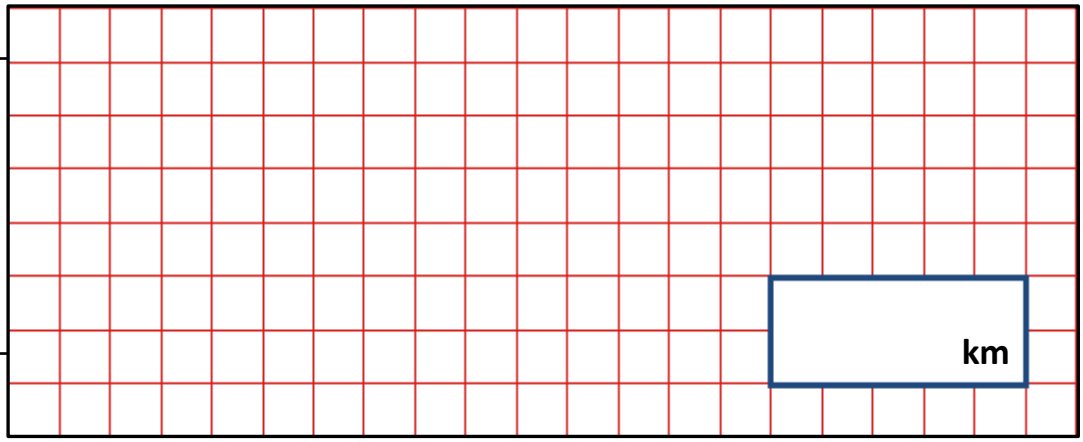
3 Sara went out on her bike for five days.

This is how far she cycled each day.

Monday	Tuesday	Wednesday	Thursday	Friday
45km	33km	55km	47km	50km

What is the mean (average) distance she cycled each day?

Show your method



2 marks

4 Circle **two** temperatures that have a difference of 8°C.

5°C -2°C 1°C -3°C -4°C

1 mark

5 **368** people are going on a train journey.

A train carriage can fit **12** people.

How many train carriages are needed for **all** of the people?

1 mark

Tickets cost **£4.50**

What is the total cost of tickets for the **368 people**?

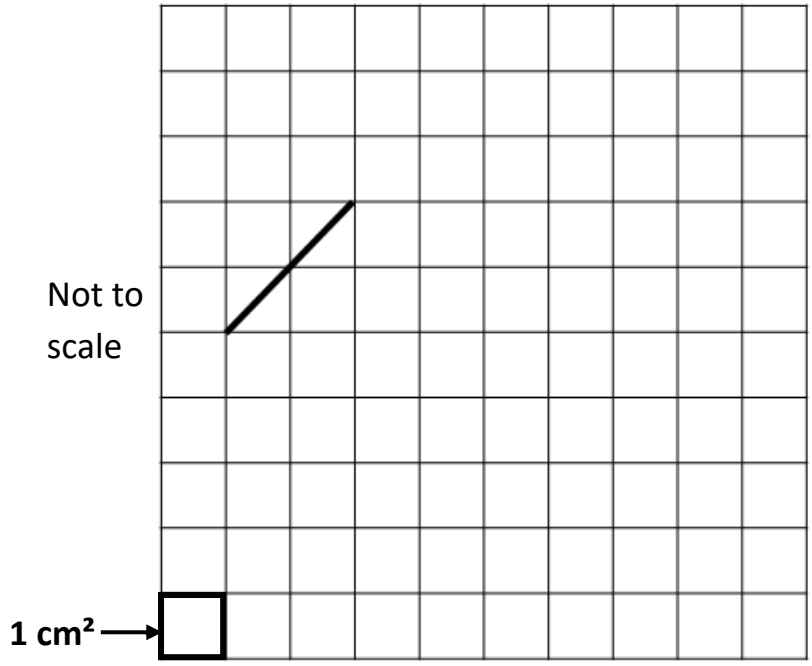
£

1 mark

6 What is the largest number **less than 65** which is a **multiple** of **2, 3 and 5**?

1 mark

7 This is a centimetre grid.



Draw 3 more lines to make a **parallelogram** with an area of 14 cm².

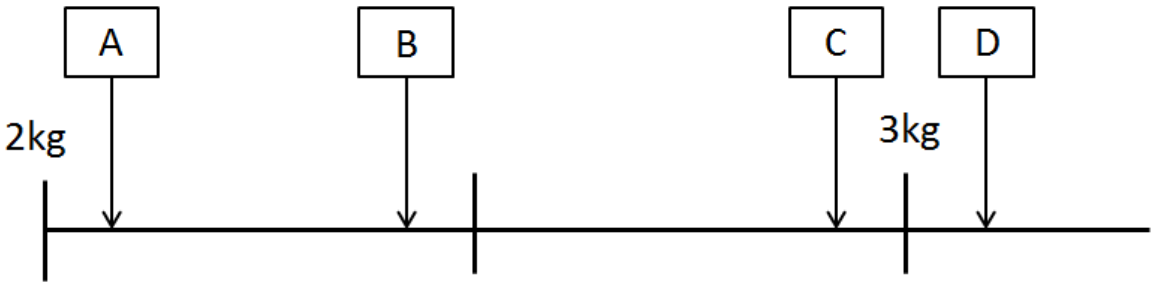
1 mark

8 Write the missing number

$$28 \times \square = 5.6$$

1 mark

9 Match each letter to one of the masses in the list below.



2850g ☐

3.15kg ☐

2.4kg ☐

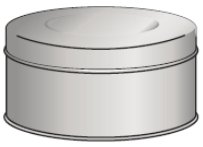
2100g ☐

☐

2 marks

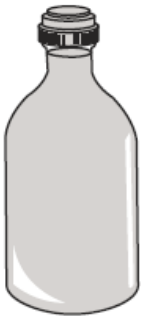
10 Here are two containers and the amounts they hold.

A



0.4 litres

B



750 millilitres

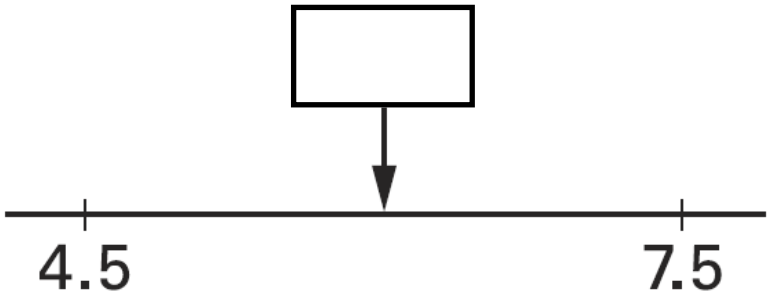
How much **more** does container B hold than container A?

Give your answer in millilitres.

ml

1 mark

11 Write the number that is **exactly half way** between 4.5 and 7.5



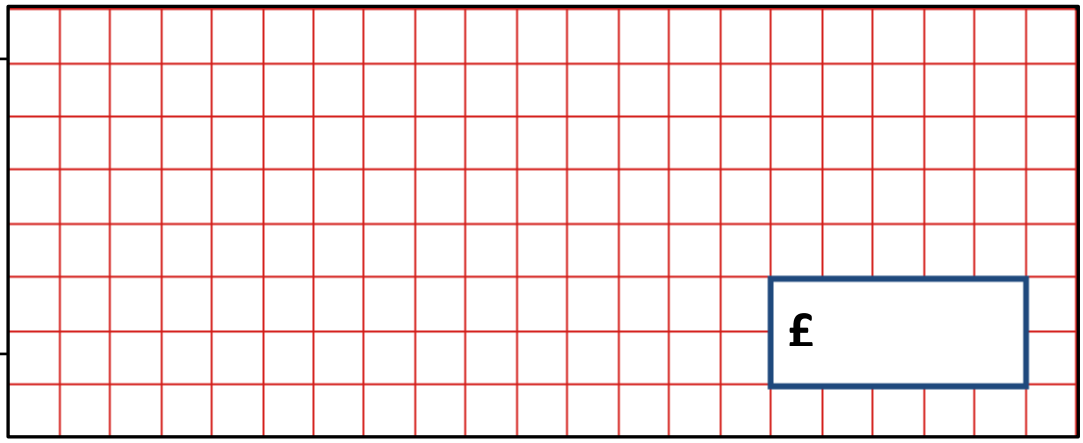
1 mark

12 **Six** friends went to the all you can eat restaurant.

The total cost for the six people was **£78**.

How much would the total cost have been if it had been for **eight** people?

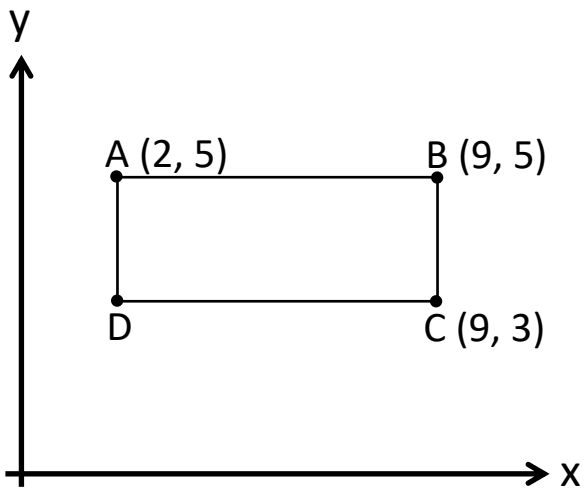
Show your method



2 marks

13 Look at the diagram.

Shape ABCD is a **rectangle**.



Not to scale

What are the coordinates of point **D**?

_____

1 mark

14 Ben asked 30 pupils which subject they liked best.

Subject	Number of Boys	Number of Girls
Mathematics	4	7
English	2	4
Science	3	3
History	0	1
Music	1	5
Total	**10**	**20**

Which subject did **20%** of the **boys** choose?

_____

1 mark

Which subject did **25%** of the **girls** choose?

_____

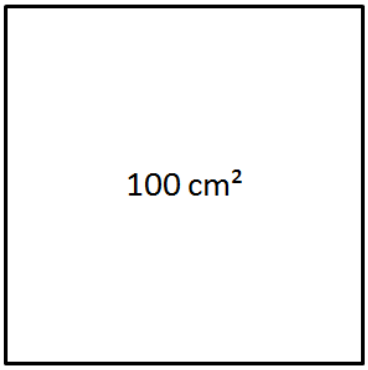
1 mark

Ben said,
"In my survey, science was equally popular with boys and girls".

Explain why Ben is **not correct.**

1 mark

15 A square has an **area** of 100 cm².



Not to scale

What would its **perimeter** be?

cm

1 mark

16 Write a number in the box to make the calculation correct.

$$12 \div \square = 4 \times 0.5$$

1 mark

17 A can from a drinks machine costs **50p**.

The table shows the coins that were put into the machine on one day.

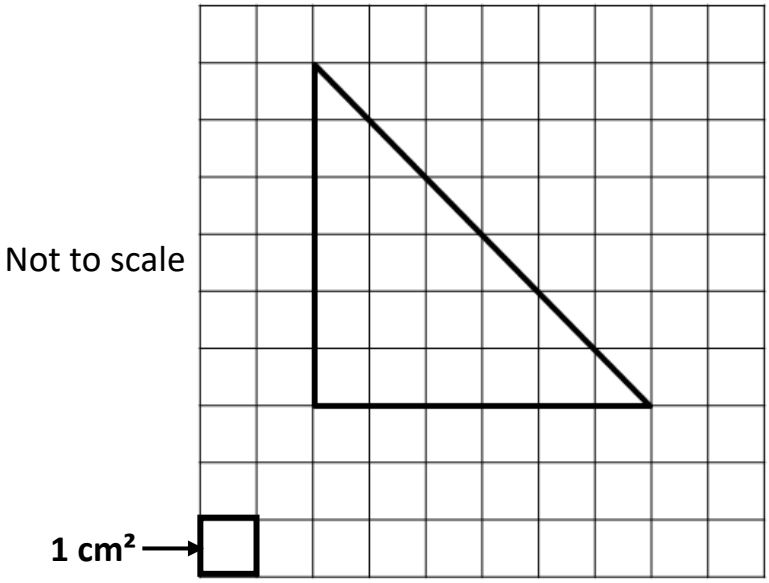
Coin	Number of Coins
50p	20
20p	12
10p	46
5p	60

How many cans of drink were sold that day?

Show your method

3 marks

18 What is the **area** of the triangle?



cm²

1 mark

19 Lin says, "30% of 60 is the same as 60% of 30."

Explain why Lin is **correct.**

1 mark

20 Here is some information about a school.

There are 3 classes in Year 5. Each class has 27 pupils.

There are 4 classes in Year 6. Each class has 25 pupils.

Use the information to match each question with the correct calculation. The first one is done for you.

How many **classes** are there altogether in Years 5 and 6?	(4 x 25) - (3 x 27)
How many **pupils** are there altogether in Years 5 and 6?	27 - 25
How many **more pupils** are there in Year 6 than in Year 5?	(4 + 25) - (3 + 27)
How many **more children** are there in **one** Year 5 class than in **one** Year 6 class?	(3 x 27) + (4 x 25)
	3 + 4

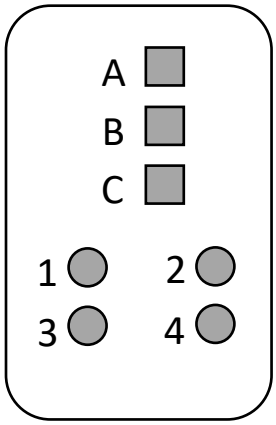
2 marks

21 A door has a security lock.

To open the door you must press the correct buttons.

The code for the door is **one** letter followed by **one** number.

For example: B3

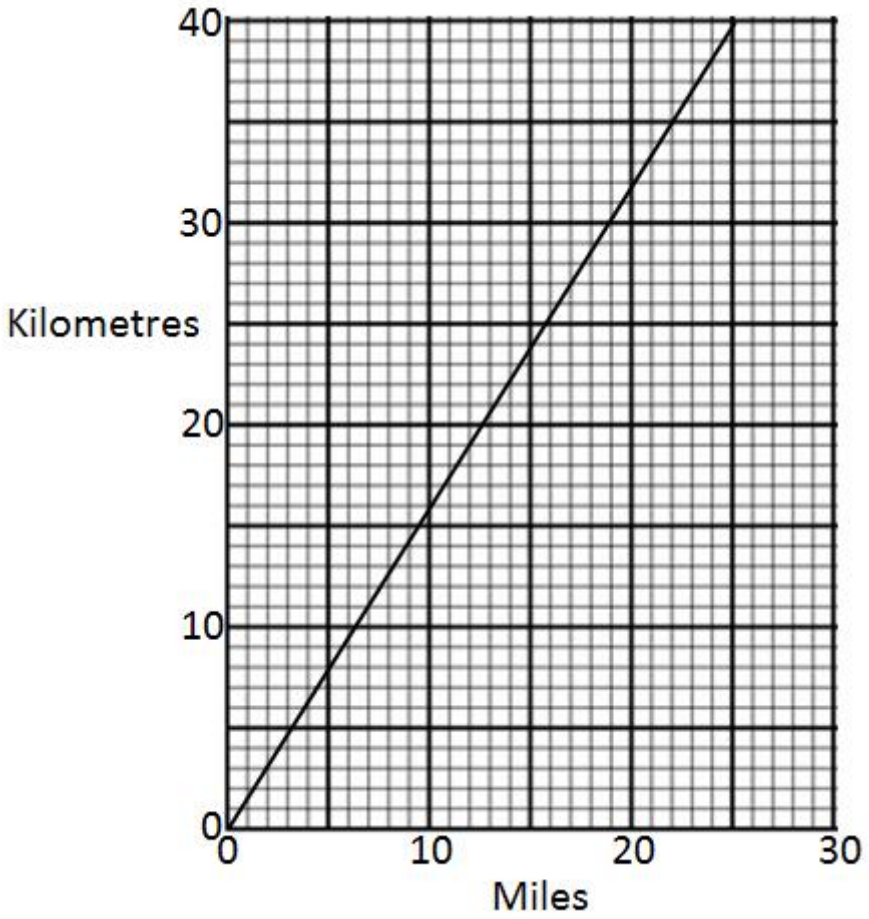


How many different codes are there altogether?

_____

1 mark

22 Ben uses this graph to convert between miles and kilometres.



Use the graph to find the missing values.

5 miles = ☐ kilometres

☐

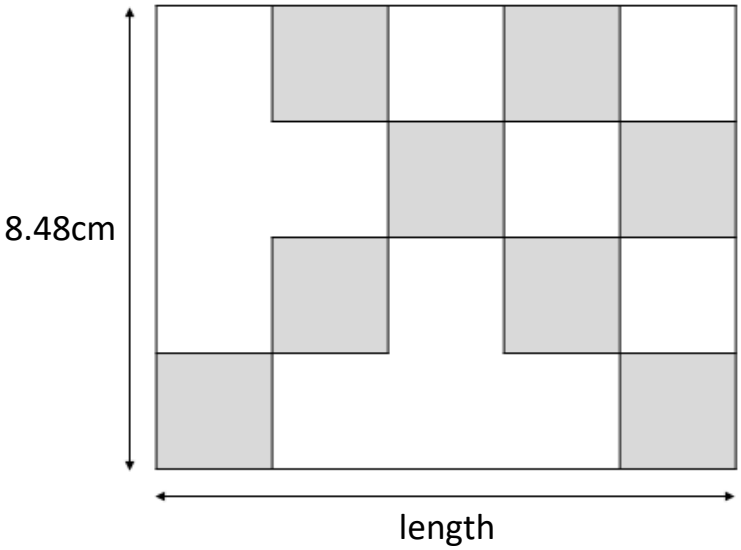
1 mark

35 kilometres = ☐ miles

☐

1 mark

23 Here is a rectangle with eight identical shaded squares inside it.



The width of the rectangle is 8.48 centimetres.

Calculate the **length** of the rectangle in centimetres.

Show your method

cm

2 marks

END OF TEST