

Key stage 2

Mathematics

Paper 3: reasoning

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DfE number						



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Instructions

You **must 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.

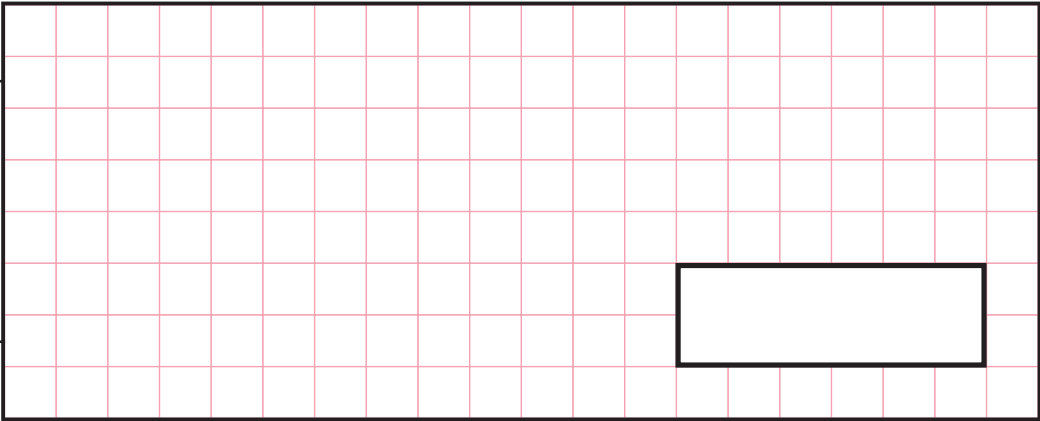
Work as quickly and as carefully as you can.

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

Do not write over any barcodes.

Some questions have a method box like this:

Show
your
method



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

If you cannot do a question, **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 number of marks available for each question.



1

Here are five numbers.

Tick **all** the numbers that are **greater than 1.05**

1.03 ☐

1.2 ☐

0.95 ☐

1.51 ☐

0.15 ☐

1 mark

2

This table shows the times that some children wake up one morning.

Name	Time
Ken	7:08
Jacob	7:45
Stefan	7:37
Marie	7:23
Lara	6:30

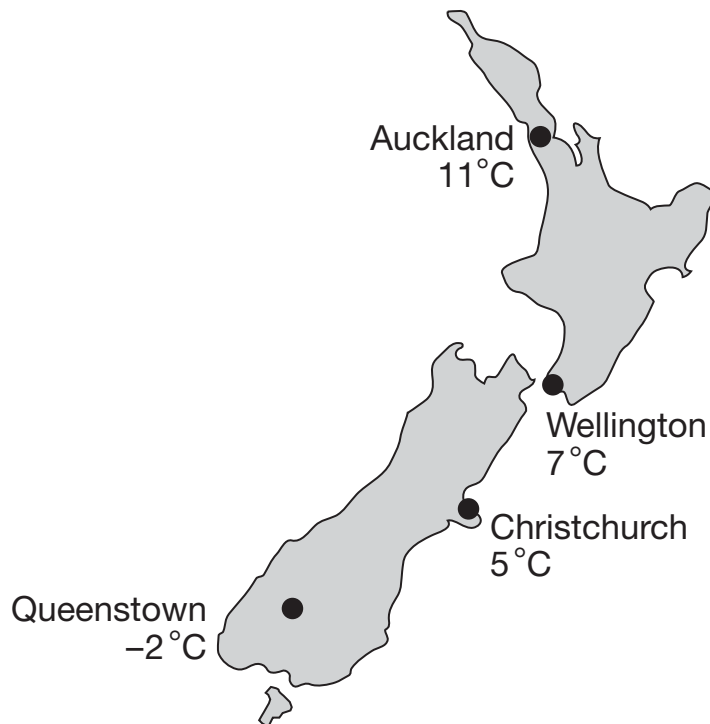
How much later does Jacob wake up than Lara?

1 mark



3

Here are some temperatures recorded in New Zealand in July.



What is the **difference** between the temperatures in Auckland and Queenstown?

°C

1 mark

The temperature in Christchurch **falls** by 6 degrees.

What is the new temperature?

°C

1 mark



B 0 0 0 8 0 A 0 5 2 4

4

Write the missing digits to make this subtraction correct.

$$\begin{array}{r} 7 \square 8 \\ - 16\square \\ \hline 546 \end{array}$$

1 mark

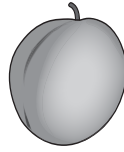


5

Adam buys **6** apples and **7** peaches.



apples
28p each



peaches
32p each

How much does he pay?

Show your method

£

2 marks



6

Write these numbers in order, starting with the **least**.

$$\frac{15}{8}$$

$$1\frac{3}{8}$$

$$\frac{9}{8}$$

$$1\frac{5}{8}$$

least

1 mark

7

Dev chooses a one-digit number.

He multiplies his number by 6

The **tens** digit of his answer is 5

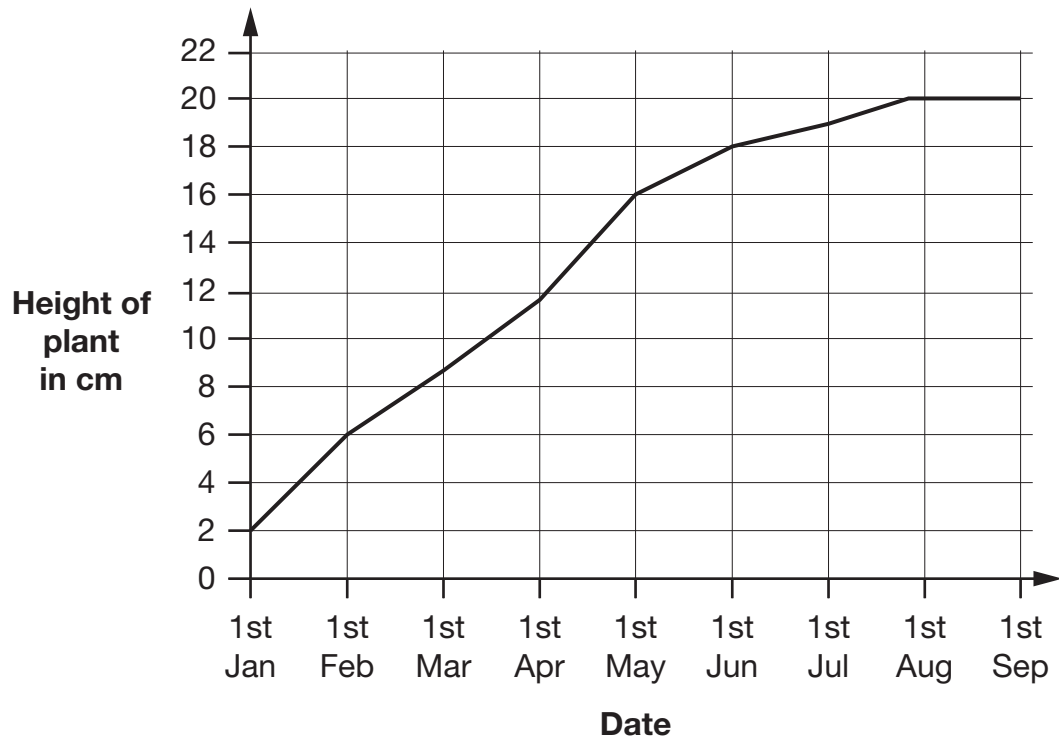
What was the one-digit number he chose?

1 mark



8

This graph shows the height of a growing plant.



How much did the plant grow between 1st January and 1st May?

cm

1 mark

During which month did the plant reach **half** of its final height?

1 mark



9

Olivia says,

3.7 rounded to the nearest whole number is 3



Explain why Olivia is **not** correct.

1 mark



10

Circle the **two** numbers below that have the **total nearest to 40**

16

17

25

28

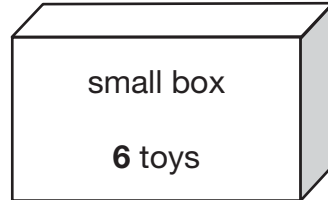
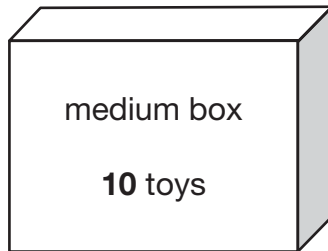
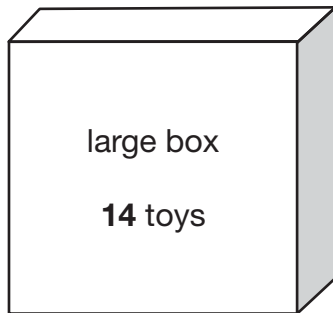
1 mark



B 0 0 0 8 0 A 0 1 1 2 4

11

John packs boxes of toys to sell in his shop.



He packs **46** large boxes, **62** medium boxes and **70** small boxes.

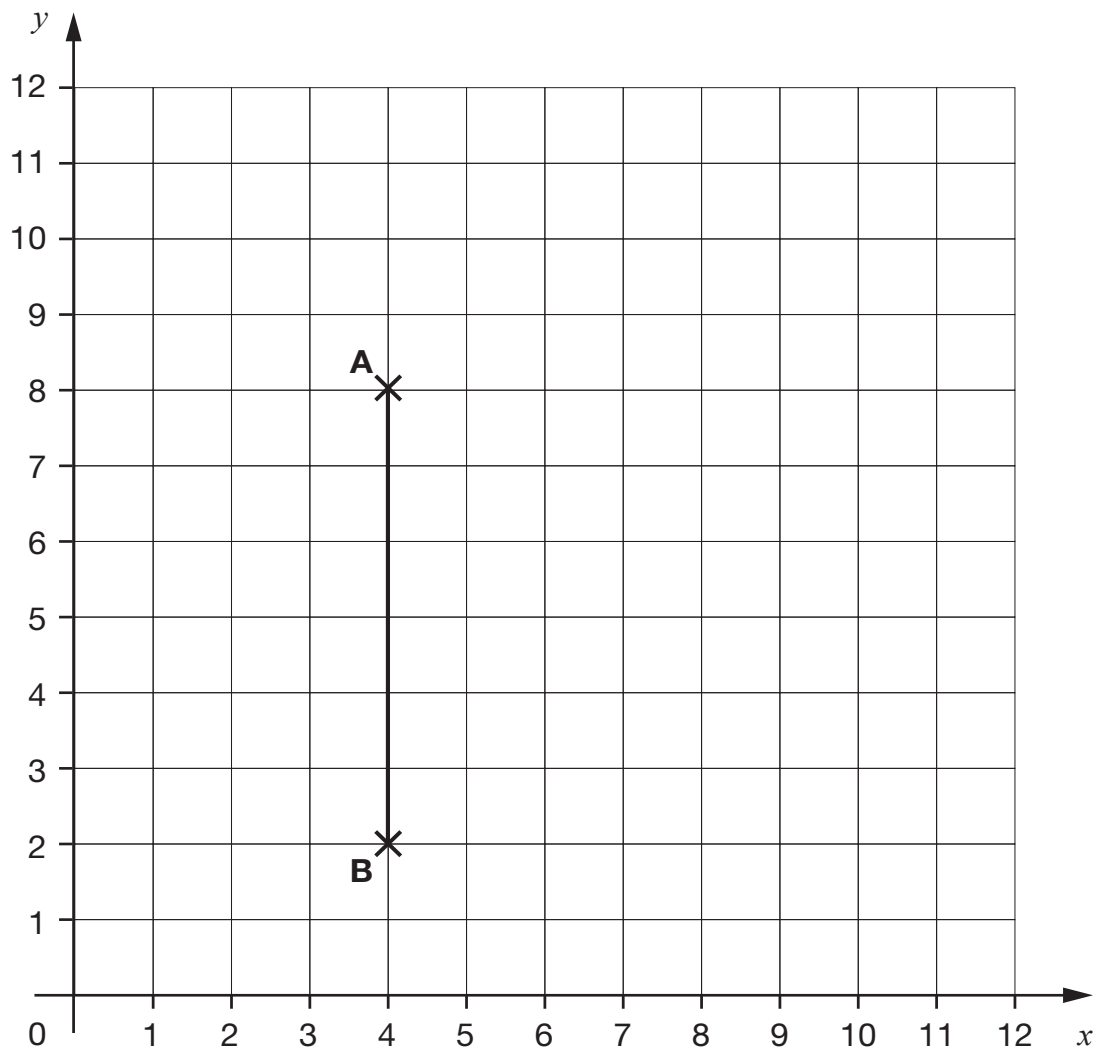
How many toys does John pack **altogether**?

Show
your
method

2 marks



12



Write the coordinates of point **B**.

(,)

1 mark

Triangle **ABC** is a **right-angled** triangle.

Point **C** is not shown.

Two sides of the triangle are equal in length.

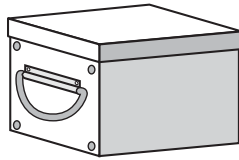
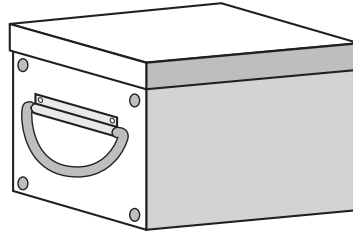
Draw **one** cross on the grid where point **C** could be.

1 mark



13

Ally has two boxes.

Box A**Box B**

Box B is **three times heavier than** Box A.

The **total** mass of the boxes is **600** grams.

What is the mass of each box?

Box A =

g

1 mark

Box B =

g

1 mark



14

This number sentence can be completed in different ways.

Show one way to complete it.

Write a **different** whole number in each box.

$$126 \div \boxed{} = \boxed{} \times 7$$

1 mark



B 0 0 0 8 0 A 0 1 5 2 4

15

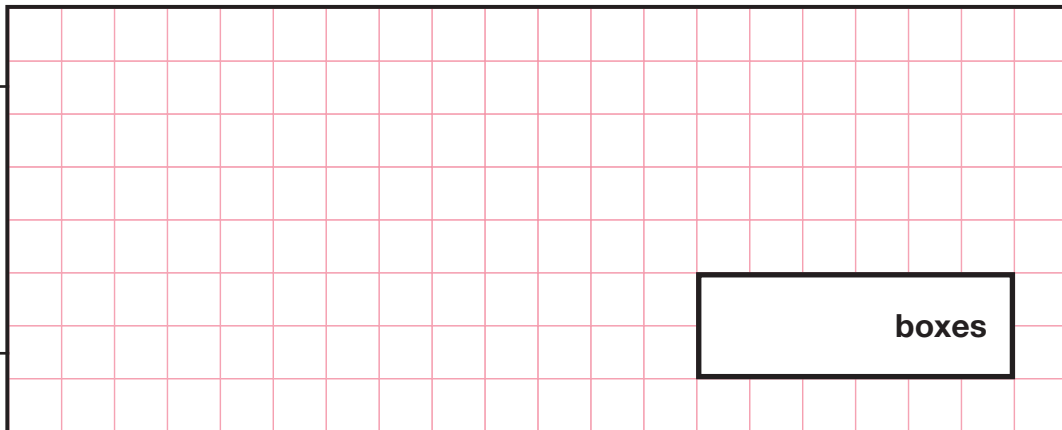
A machine in a bakery makes **1,250** loaves of bread in one hour.

The machine runs for **8** hours in one day.

The loaves of bread are packed into boxes of **40**

How many boxes are filled in one day?

Show
your
method



boxes

2 marks



16

Here are some digit cards.

6

3

2

You can use each card **more than once**.

Use the cards to make:

a **prime** number

--	--

a **square** number

--	--

a **multiple of 7**

--	--

2 marks



17

Tick the number sentences that are **correct**.

$$\frac{1}{2} = 0.5$$

☐

$$\frac{2}{5} = 0.2$$

☐

$$\frac{7}{10} = 0.07$$

☐

$$\frac{9}{20} = 0.45$$

☐

$$\frac{27}{100} = 0.27$$

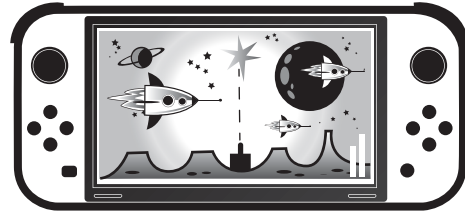
☐2 marks

18

Layla is saving to buy a game.

It costs **£60**

For every **£4** that Layla saves,
her mum gives her **£1**



How much must Layla save to reach her target?

Show
your
method

A blank sheet of graph paper with a grid pattern. A rectangular box is drawn on the right side, containing the symbol £.

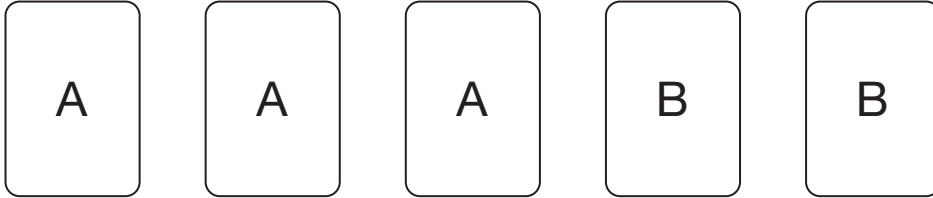
2 marks



19

Here are five cards.

A and B stand for two **different** whole numbers.



The sum of all of the cards is **35**

Give **one pair** of possible values for A and B.

A =

B =

1 mark

Now write a **different pair** of values for A and B.

A =

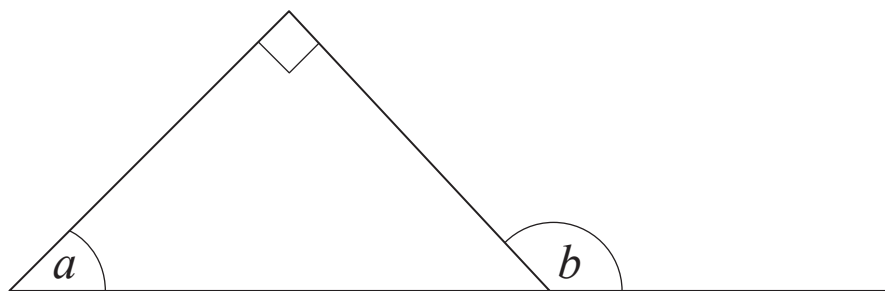
B =

1 mark



20

The triangle in this diagram is **isosceles**.



Not
to
scale

What are the sizes of angles a and b ?

a is

1 mark

b is

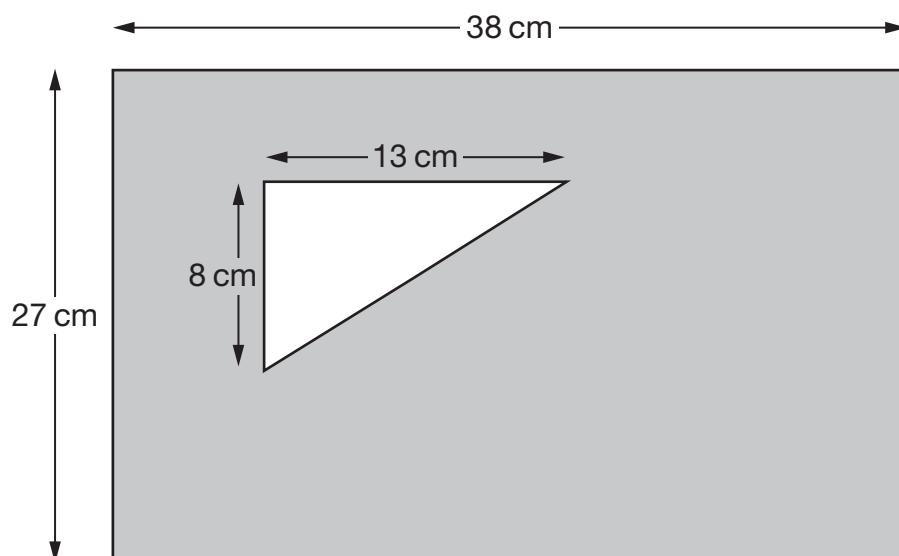
1 mark



B 0 0 0 8 0 A 0 2 1 2 4

21

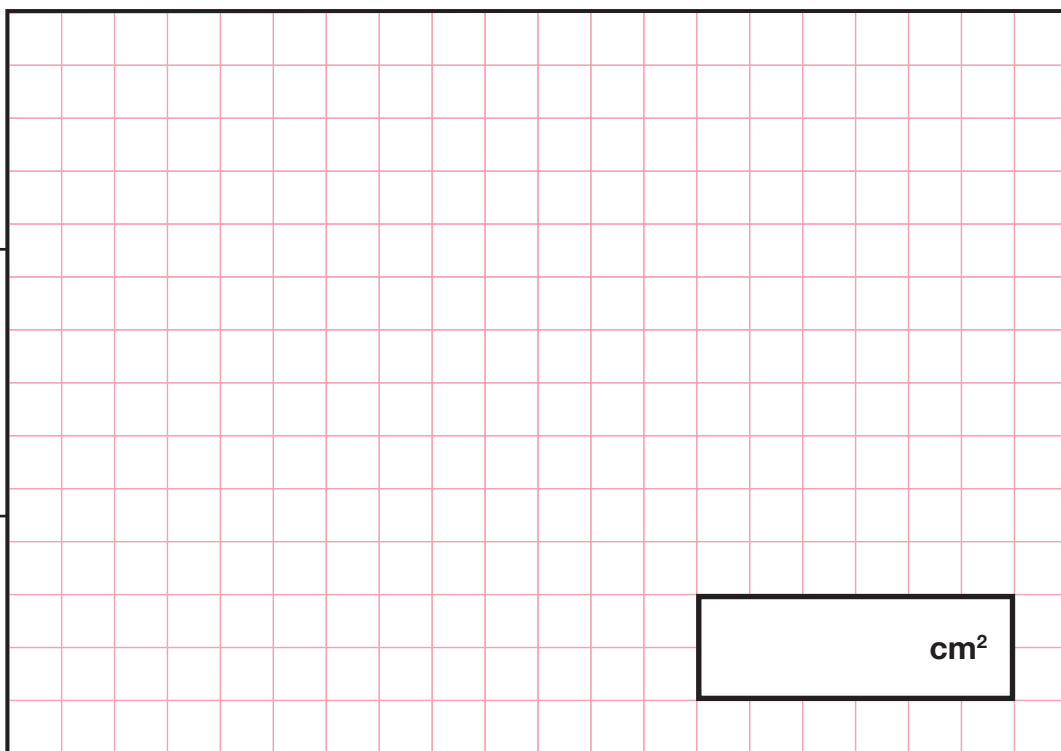
This diagram shows a triangle inside a rectangle.



Not actual size

What is the area of the **shaded** section?

Show
your
method



3 marks



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