Ma

YEAR 7

LEVELS 3–4

2004

Year 7 mathematics test

Paper 1

Calculator **not** allowed

Please read this page, but do not open your booklet until your teacher tells you to start. Write your name and the name of your school in the spaces below.

First name _____

Last name _____

School _____

Remember

- The test is 45 minutes long.
- You **must not** use a calculator for any question in this test.
- You will need: pen, pencil, rubber, ruler, tracing paper and a mirror (optional).
- This test starts with easier questions.
- Try to answer all the questions.
- Write all your answers and working on the test paper – do not use any rough paper. Marks may be awarded for working.
- Check your work carefully.
- Ask your teacher if you are not sure what to do.

For marker's use only

Total marks	

Instructions

Answers

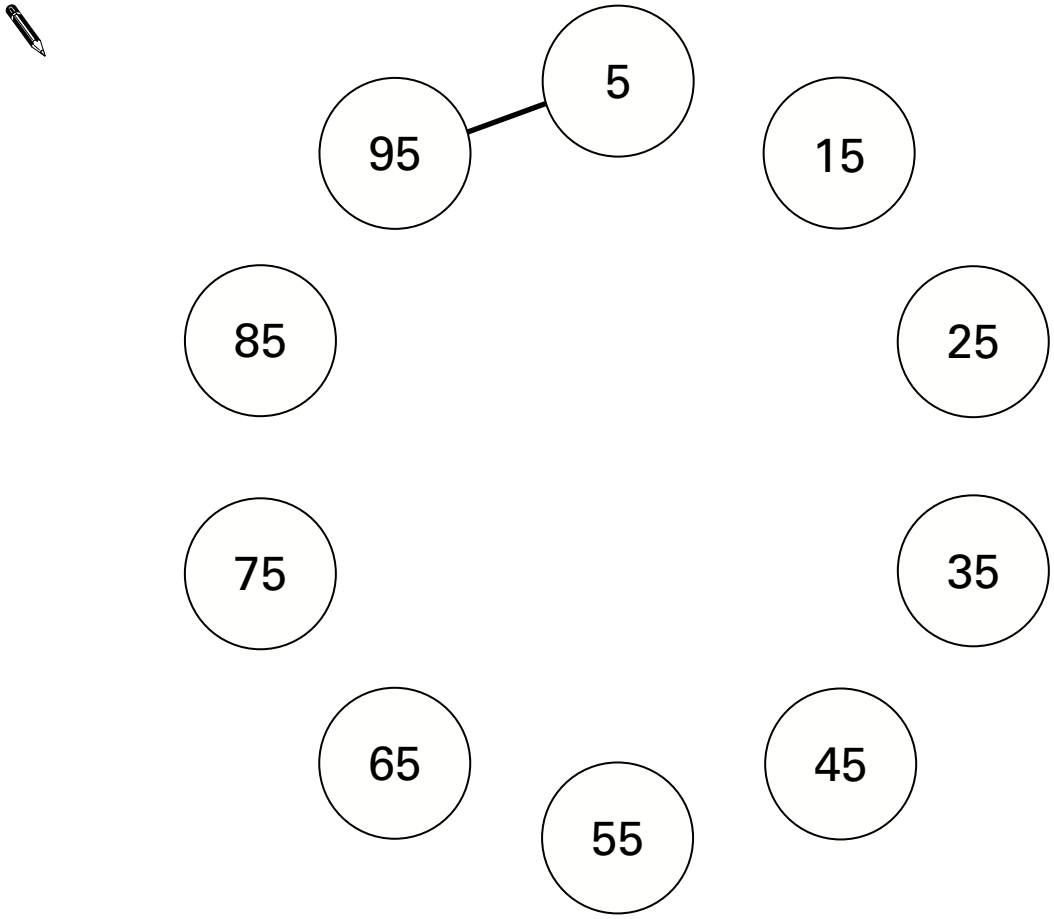
This means write down your answer or show your working and write down your answer.

Calculators

You **must not** use a calculator to answer any question in this test.

1 Draw lines to join every pair of numbers that **add to make 100**

One is done for you.



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2 marks

2 This table shows the fastest speeds, in mph, that different types of vehicles are allowed to travel.

Type of vehicle	Built-up area	Single carriageway	Dual carriageway	Motorway
Car	30	60	70	70
Car towing a caravan	30	50	60	60
Bus or coach	30	50	60	70

(a) A car is towing a **caravan**.

What is the fastest speed it is allowed to travel on a **single carriageway**?

..... mph

1 mark

(b) A **car** and a **coach** are travelling on a **dual carriageway**.

How much faster is the car allowed to travel?

..... mph

1 mark

3 The diagram shows part of a number grid.

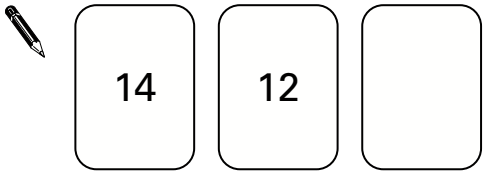
Fill in the missing numbers.

852	853	
842		844
	833	834

1 mark

4 (a) The numbers on these cards should have a **total of 50**

Fill in the missing number.

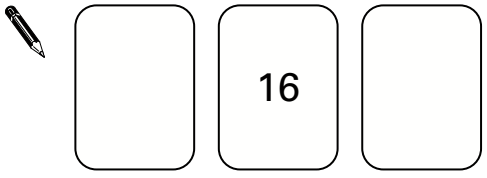


1 mark

(b) The numbers on these cards should have a **total of 50**

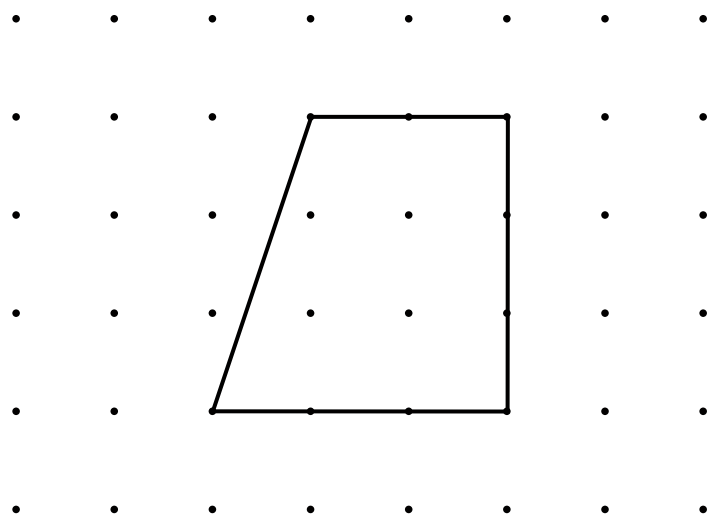
What could the numbers be?

Fill in the missing numbers.



1 mark

5 Look at the shape drawn on the square grid.



For each statement below, tick (✓) True or False.

	True	False
The shape has exactly 2 right angles.	☐	☐
The shape has 2 pairs of parallel lines.	☐	☐
The shape has one line of symmetry.	☐	☐
The shape is a quadrilateral.	☐	☐

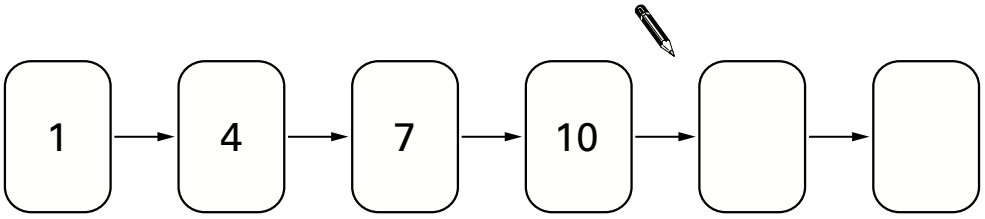
. . . . .

. . . . .

2 marks

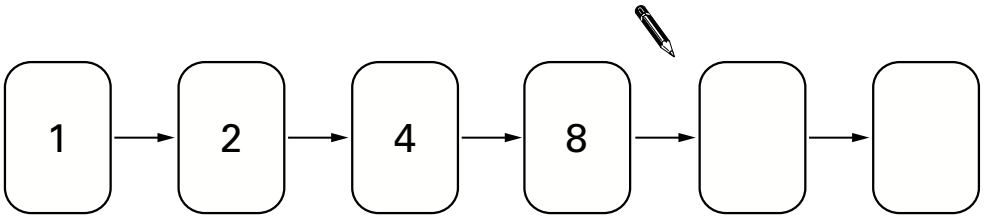
6 (a) Fill in the missing numbers in these number chains.

Rule: **Add 3** each time.



1 mark

Rule: **Multiply by 2** each time.



1 mark

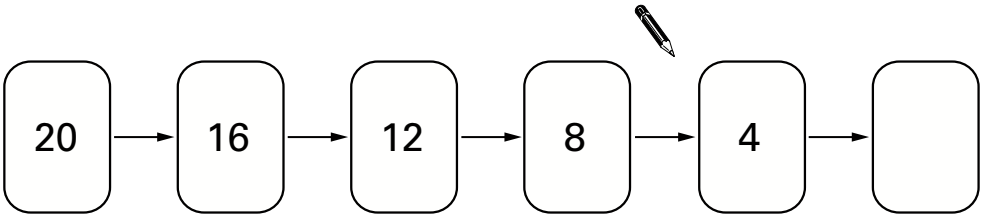
(b) Here is a different number chain.

What could the rule be?

Fill in the rule. Then use the rule to write in the missing number.

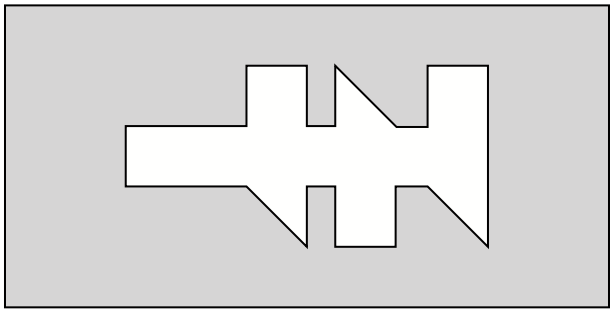
Rule: ..... each time.

1 mark



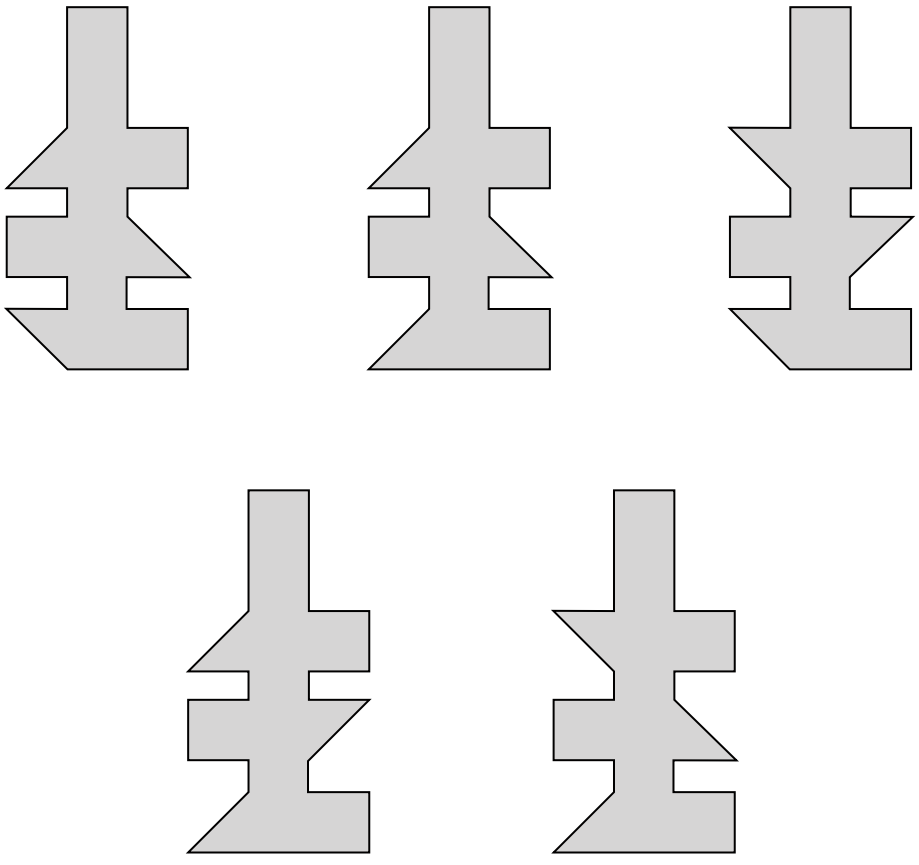
1 mark

7 A shape is cut out of a piece of card, leaving a hole.



Which shape below will fit the hole exactly?

Put a ring round the correct shape.

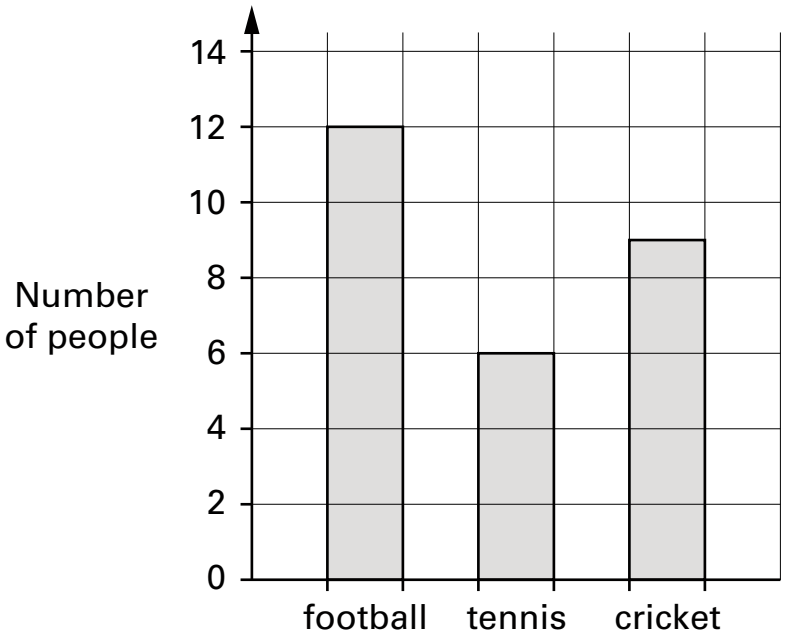


1 mark

8 Anna and Jack did a survey together.

They asked people 'What is your favourite sport?'

Anna drew a bar chart to show the results.



Jack started to draw a pictogram to show the **same results**.

He drew the result for football.

Draw the results for tennis and cricket.

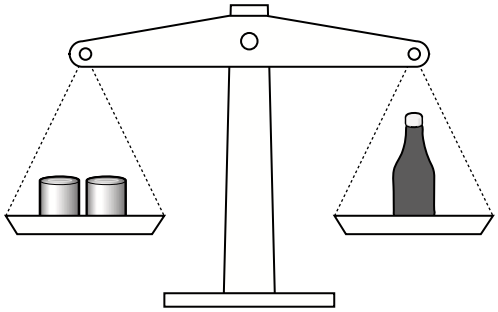
football	● ● ● ●
tennis	
cricket	

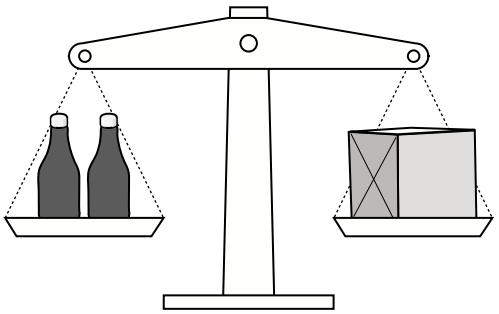
. . . .

. . . .

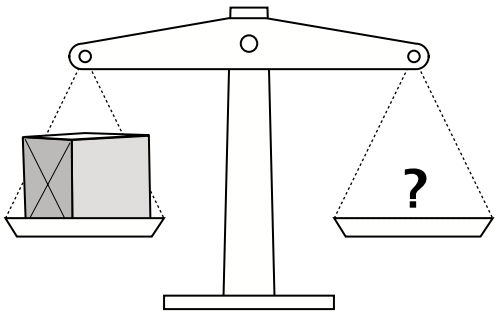
2 marks

9 **2 tins** balance **1 bottle**. **2 bottles** balance **1 box**.



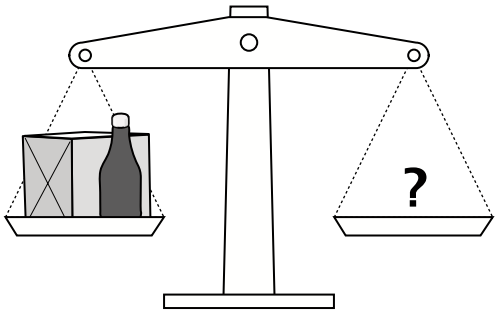


How many **tins** make each of these balance?



? = ... tins

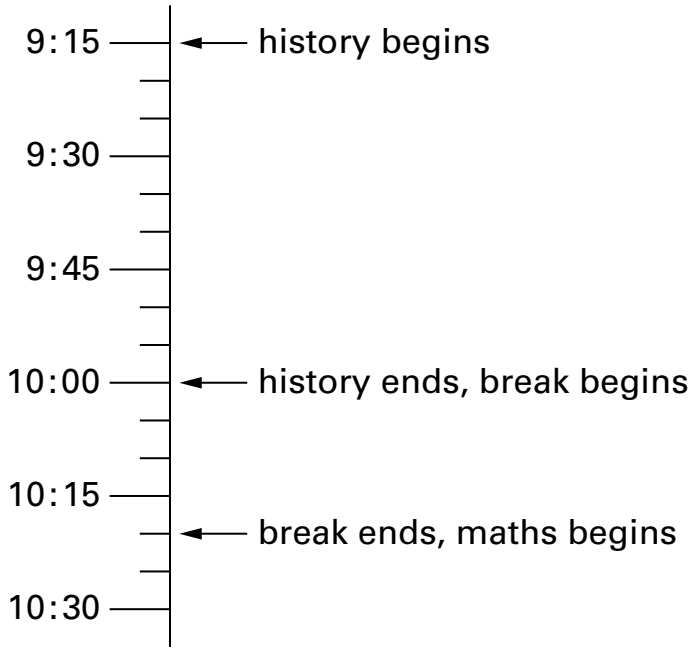
1 mark



? = ... tins

1 mark

10 Here is part of Nina's school timetable for Monday.



(a) For how many minutes does Nina's **history** lesson last?

..... minutes

1 mark

(b) For how many minutes does Nina's **break** last?

..... minutes

1 mark

(c) Nina starts school at **9am**. She finishes school at **4pm**.

How many hours is Nina's school day?

..... hours

1 mark

11 Fill in the missing numbers.

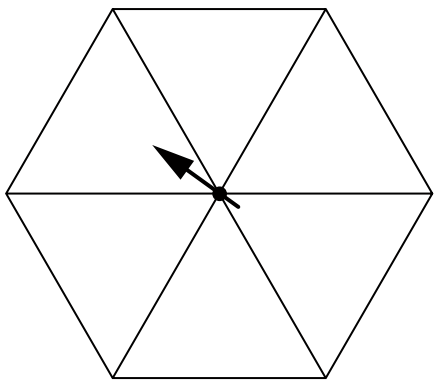
$3.7 + 2.5 = \square$

1 mark

$2.9 + \square = 4$

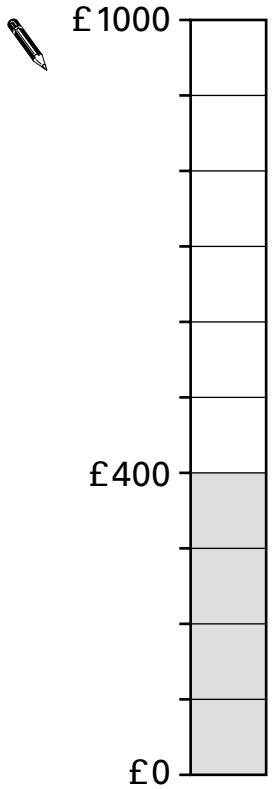
1 mark

12 Shade this spinner so that there is a **50% chance** that the arrow will land on **shaded**.



1 mark

13 A class is collecting money for charity.



They want a total of **£1000**

By the end of April, they have collected **£400**

(a) **What percentage** of their total have they collected by the end of April?

..... %

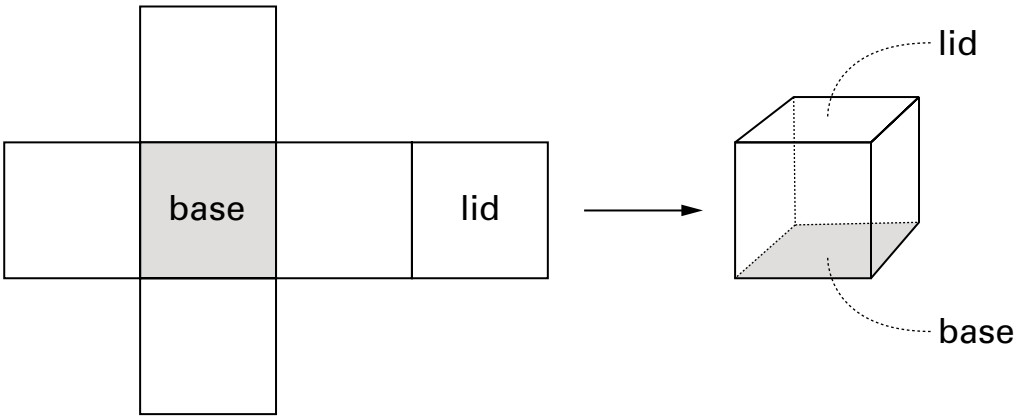
1 mark

(b) By the end of May, they have collected **85%** of their total.

Shade more of the diagram to show this.

1 mark

14 The diagram shows a net that folds to make a box.

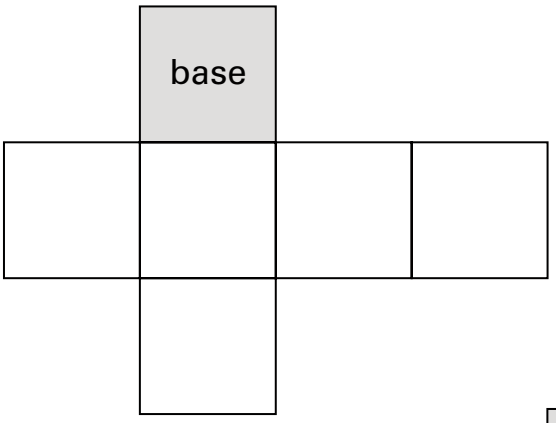


There are two different nets shown below.

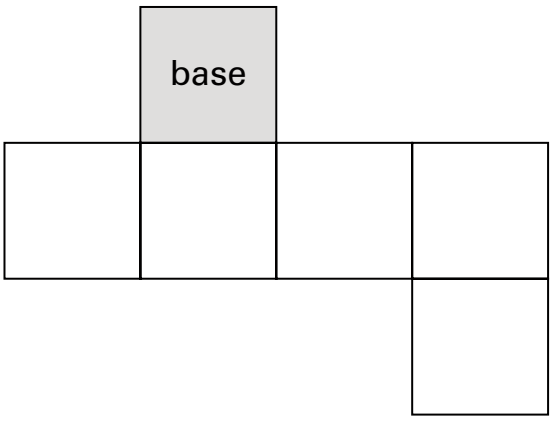
Each net folds to make a box.

The base of each box is labelled.

For each box, **label** the face that will be the **lid**.



1 mark



1 mark

15 I am thinking of two numbers.

When I **add** my numbers, the answer is **11**

When I **multiply** my numbers, the answer is **24**

What are my numbers?

..... and ..... 1 mark

16 Look at the pairs of numbers.

For each pair, put a ring round the number that is **bigger**.

The first one is done for you.

	1001	999
	3	–5
	4	3.9
	2.72	2.8

1 mark

17 The numbers in the oval show an **add 11** pattern.

50	51	52	53	54	55	56	57	**58**	59
40	41	42	43	44	45	46	**47**	48	49
30	31	32	33	34	35	**36**	37	38	39
20	21	22	23	24	**25**	26	27	28	29

(a) What pattern do the numbers in this oval show?

50	51	52	**53**	54	55	56	57	58	59
40	41	42	43	**44**	45	46	47	48	49
30	31	32	33	34	**35**	36	37	38	39
20	21	22	23	24	25	**26**	27	28	29

. . . . . 1 mark

(b) Draw an oval to show one **add 10** pattern.

50	51	52	53	54	55	56	57	58	59
40	41	42	43	44	45	46	47	48	49
30	31	32	33	34	35	36	37	38	39
20	21	22	23	24	25	26	27	28	29

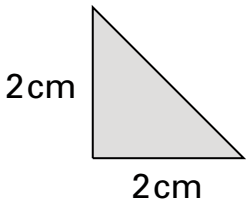
. . . . . 1 mark

18 Fill in the missing fraction.

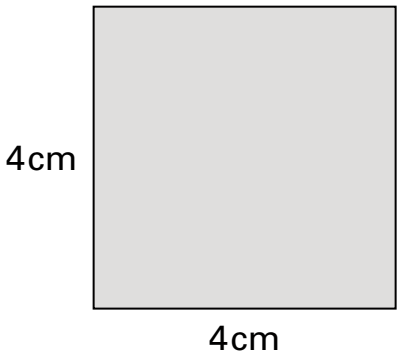
$$\frac{3}{4} - \square = \frac{1}{2}$$

. . . . .
1 mark

19 This is a right-angled triangular tile.



How many of these triangular tiles fit together to make a 4cm by 4cm square?



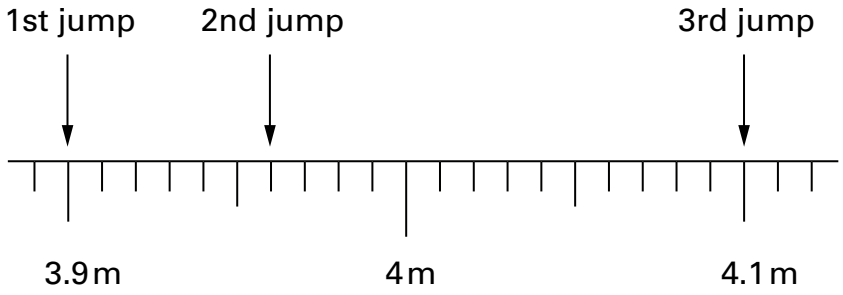
. . . . . .

. . . . .
1 mark

20 Peter took part in a long jump competition.

He had three jumps.

The arrows on the scale show how far he jumped each time.



(a) How far did Peter jump on his **2nd** jump?

m

1 mark

(b) Peter jumped further on his **3rd** jump than on his **1st** jump.

How much further?

Write your answer in metres.

m

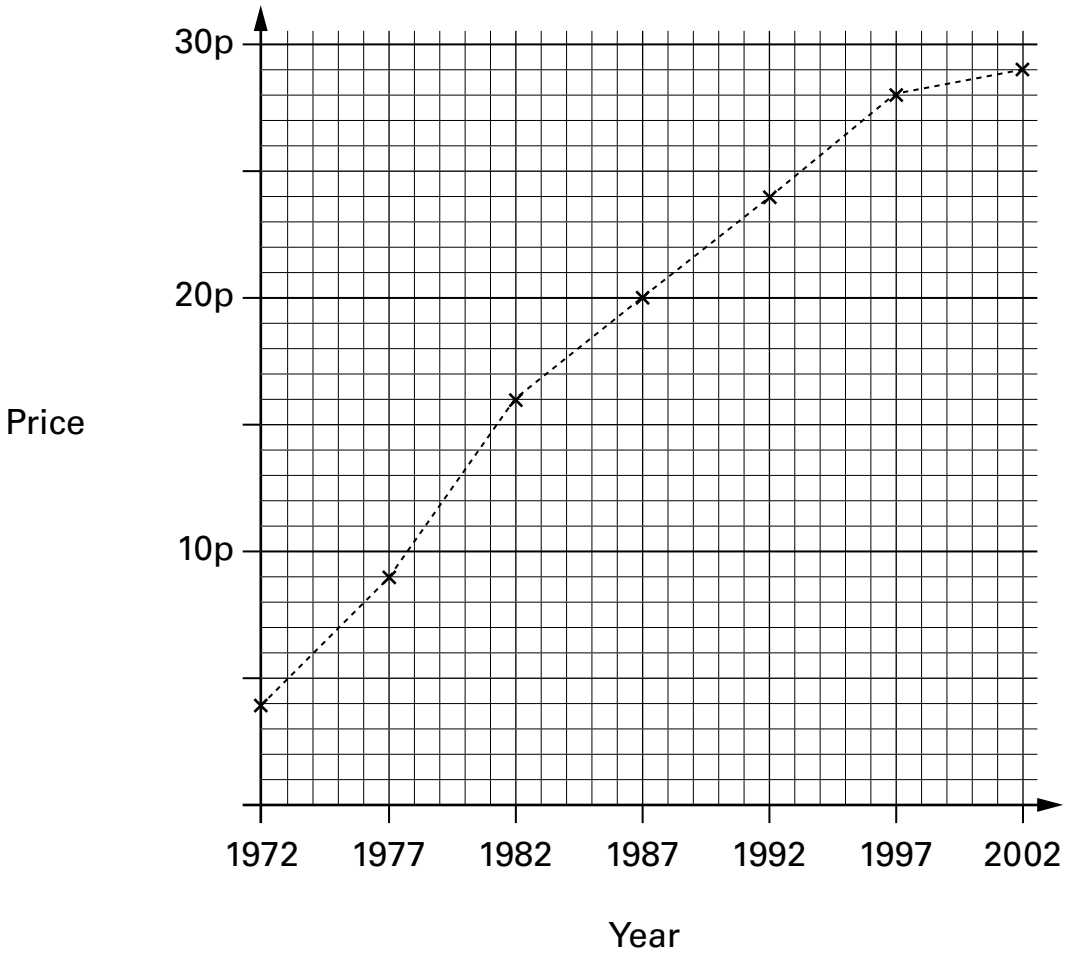
1 mark

Now write your answer in centimetres.

cm

1 mark

21 The graph shows how the price of a chocolate bar has changed.



Fill in the gaps below.

Between **1992** and **2002**,
the price of the chocolate bar increased by ..... p

1 mark

In **1992**,
the price of the chocolate bar was **6 times as much** as in .....

1 mark

The **smallest increase** in price
was in the five years between ..... and .....

1 mark

QCA, Years 7 and 8 Team, 83 Piccadilly, London W1J 8QA

QCA/04/1245 (pupil pack)
QCA/04/1241 (teacher pack)