Ma

KEY STAGE
3

TIER
3–5

2008

Mathematics test

Paper 1

Calculator **not** allowed

First name _____

Last name _____

School _____

Remember

- The test is 1 hour long.
- You **must not** use a calculator for any question in this test.
- You will need: pen, pencil, rubber, ruler, tracing paper and 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

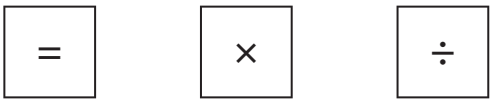
Answers

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. Look at these symbols.



Choose two of the symbols to make a correct calculation.

12 ☐ 3 ☐ 4

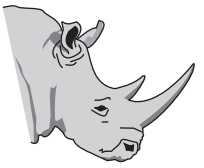
1 mark

Now choose two of the symbols to make a **different** correct calculation.

12 ☐ 3 ☐ 4

1 mark

2. Look at the table.



Type of rhino	Wild population	Captive population
Black rhino (**B**)	3100	250
White rhino (**W**)	11 670	780
African rhino (**A**)	14 770	1030
Indian rhino (**I**)	2400	140
Javan rhino (**J**)	60	0

Use the information to answer these questions.

(a) Which type of rhino is most common in the **wild population**?

_____ 1 mark

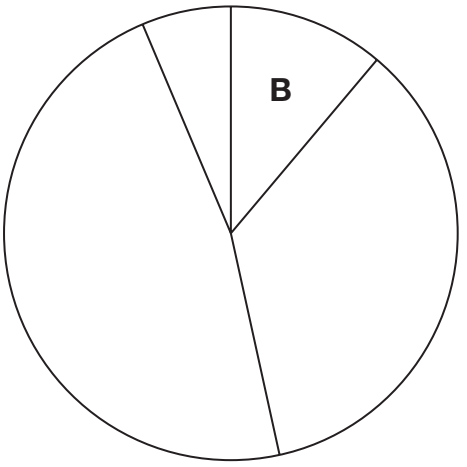
(b) How many more Black rhinos than Indian rhinos are there in the **captive population**?

_____ 1 mark

(c) The pie chart below shows the **captive population**.

Write the missing letters on the pie chart.

One is done for you.



1 mark

(d) One type of rhino is not on the pie chart.

Explain why.

1 mark

3. Here are six different units of length.

kilometres	metres	centimetres
miles	feet	inches

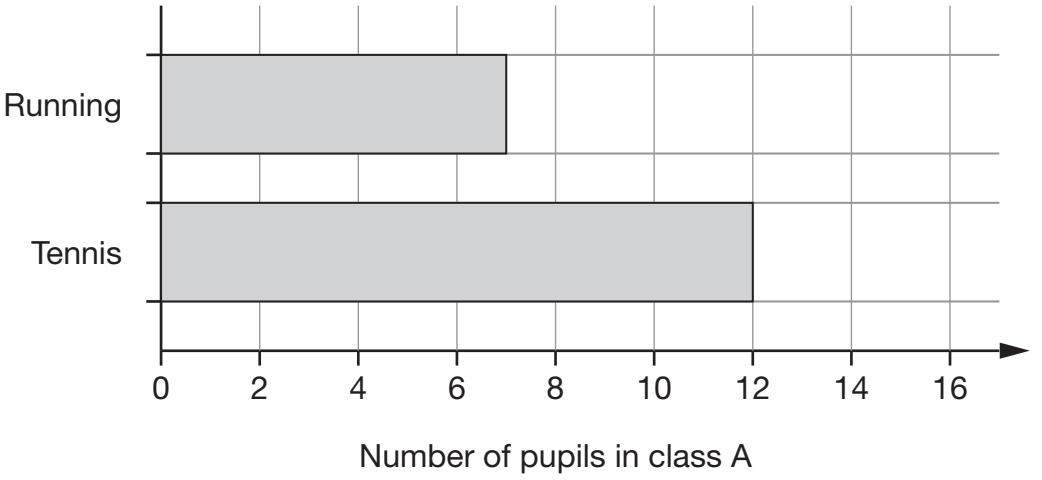
Write the two units that best complete the sentences below.

A girl is 12 years old.

Her height is about **1.5** _____ 1 mark

Her height is about **5** _____ 1 mark

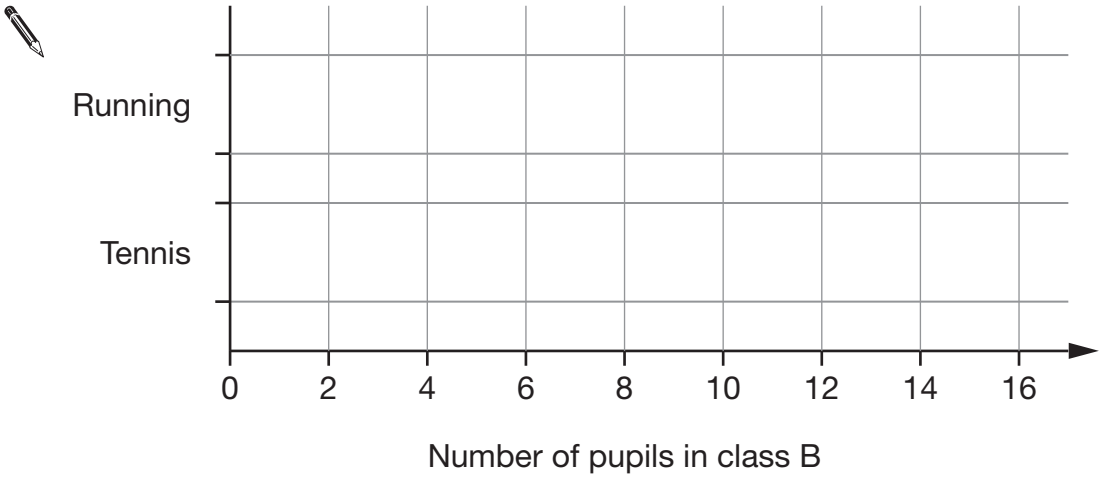
4. The bar chart shows the number of pupils in class **A** who go to running club and tennis club.



In class **B**:

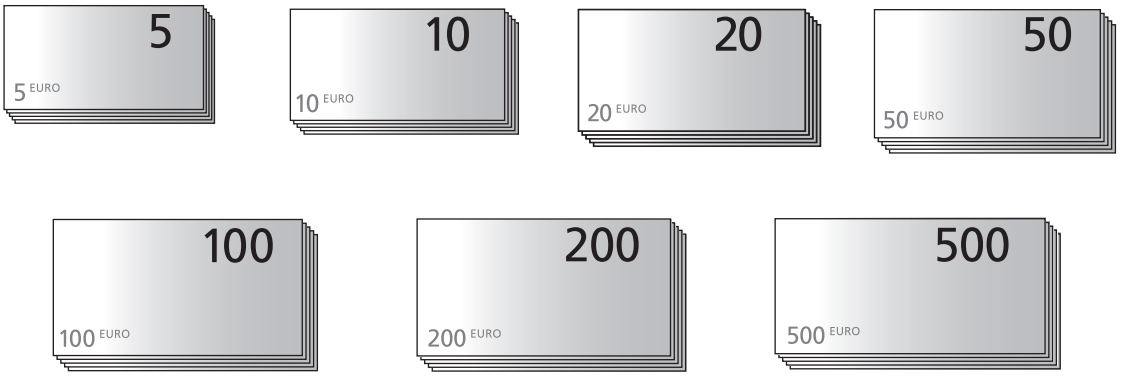
- **Twice** as many pupils go to **running** club as in class **A**.
- **Half** as many pupils go to **tennis** club as in class **A**.

Complete the bar chart to show this information for class **B**.



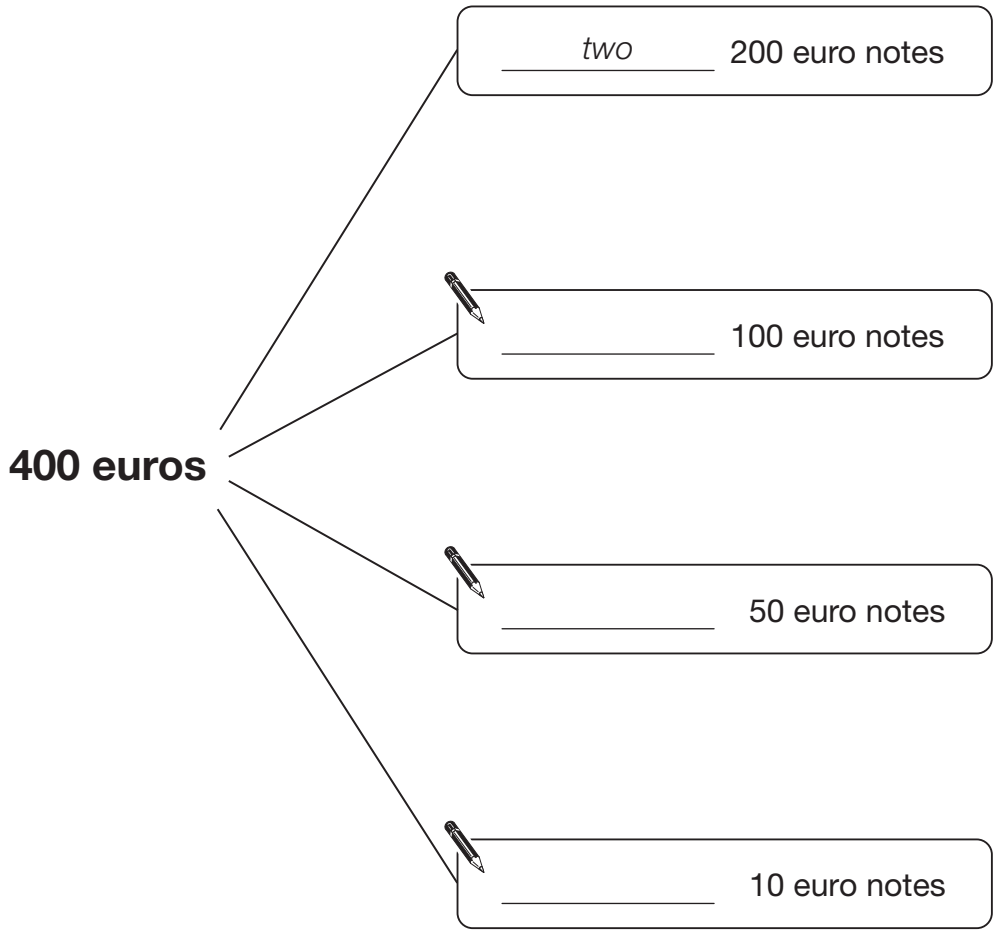
2 marks

5. Countries that use euros have these notes.



(a) Show different ways of paying **400** euros.

The first way is done for you.



2 marks

(b) A woman has **four notes**.

The notes total **one thousand** euros.

What notes does she have?

Write the value of each one.

_____ euros

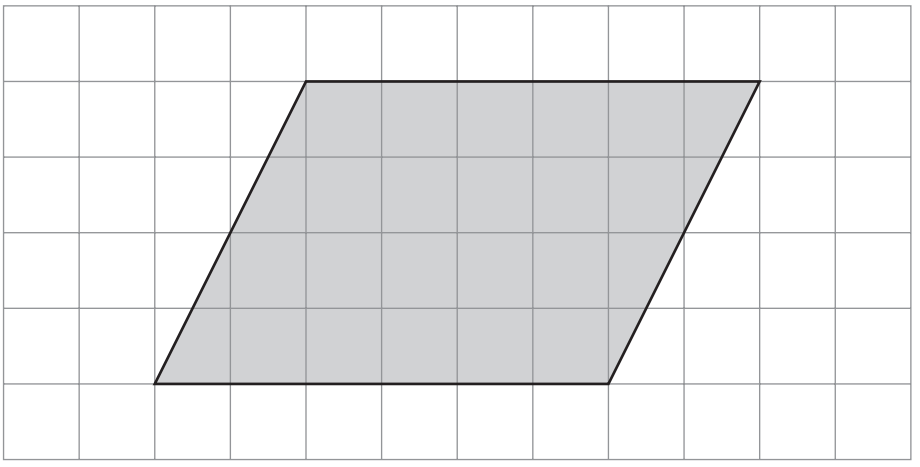
_____ euros

_____ euros

_____ euros

1 mark

6. Look at the shaded shape drawn on the square grid.



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

	True	False
The shape is a quadrilateral.	☐	☐
The shape is a square.	☐	☐
The shape has one line of symmetry.	☐	☐
The shape has no right angles.	☐	☐

2 marks

7. People who have been married for many years have special anniversaries.

Number of years they have been married	Special anniversary
25 years	Silver
50 years	Golden
60 years	Diamond

(a) Betty and Stan were **married** in **1952**.

In what year was their **golden** anniversary?

_____ 1 mark

(b) Lyn and Chris had their **silver** anniversary in **1985**.

In what year were they **married**?

_____ 1 mark

(c) Jean and Peter had their **diamond** anniversary in **1997**.

In what year was their **golden** anniversary?

_____ 1 mark

8. Work out the following.

1706 + 185

1 mark

576 – 83

1 mark

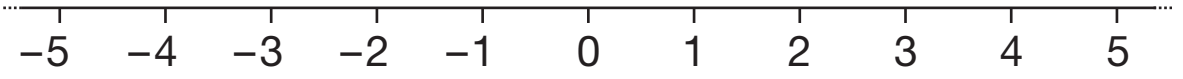
65 × 9

1 mark

154 ÷ 7

1 mark

9. Here is a number line.



It can help you work out the answers to the calculations below.

The first one is done for you.

$-3 + 1 = \underline{-2}$

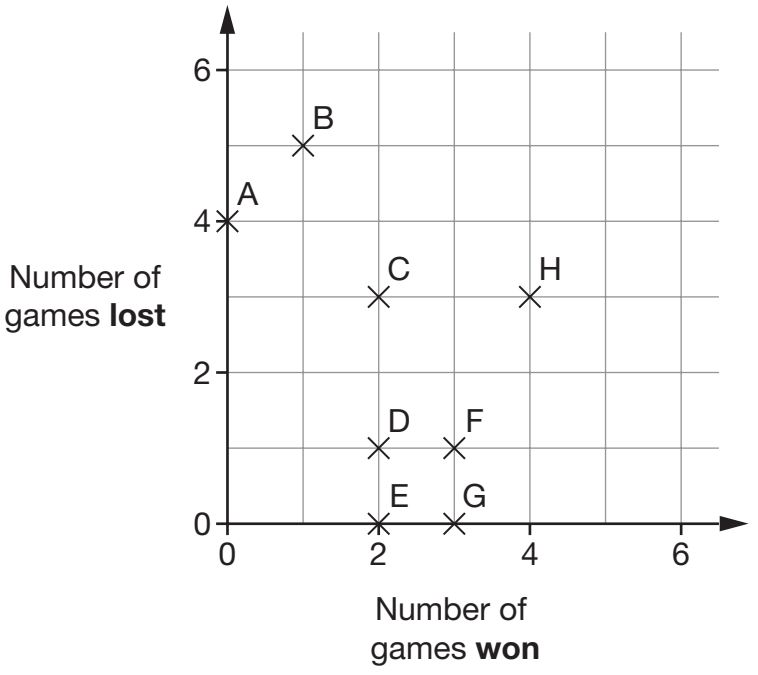
$-4 + 1 = \underline{\quad}$ 1 mark

$-2 + 5 = \underline{\quad}$ 1 mark

$3 - 5 = \underline{\quad}$ 1 mark

10. 8 people took part in a chess competition.

The diagram shows how many games each person won, and how many games each person lost.



(a) Who won the most games? Write the person's letter.

_____ 1 mark

(b) How many games were won by person **A**?

_____ 1 mark

(c) Each person played **7 games**.

Each game was won, lost or drawn.

How many of person **D**'s games were **drawn**?

_____ 1 mark

11. Write the missing numbers in the boxes.

$8 \times \square = 800$

1 mark

$0.8 \times \square = 8$

1 mark

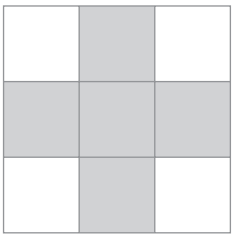
12. Look at the calculation below.

Write the correct digits in the boxes.

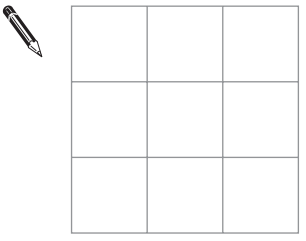
4	3		+	2		8	=		7	5

2 marks

13. On the square grid below, some squares are shaded to make a pattern with exactly **4 lines** of symmetry.

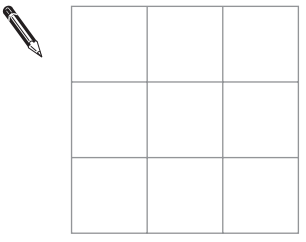


(a) On the square grid below, shade some squares to make a pattern with exactly **2 lines** of symmetry.



1 mark

(b) On the square grid below, shade some squares to make a pattern with exactly **1 line** of symmetry.



1 mark

14. (a) Henry thinks of a number **between 1 and 20**

He thinks of the number **12**

For each question below, tick (✓) Yes or No for Henry's number.

	Yes	No
Is it an **even** number?		
Is it a **multiple of 3**?		
Is it a **factor of 18**?		

1 mark

(b) Ashraf also thinks of a number **between 1 and 20**

The table shows information about his number.

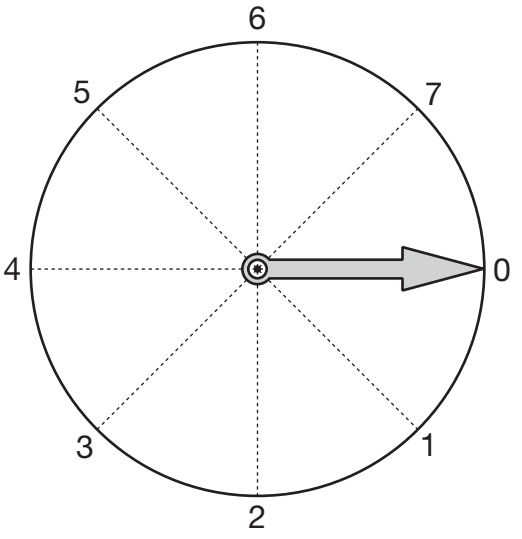
	Yes	No
Is it an **even** number?		✓
Is it a **multiple of 3**?	✓	
Is it a **factor of 18**?		✓

What is Ashraf's number?

_____

1 mark

15. Look at the dial.



The pointer starts at 0 and turns **clockwise** around the centre.

(a) Which number does it point to after turning clockwise through **90°** ?

_____

1 mark

(b) The pointer turns clockwise from **3 to 6**

Through how many degrees does it turn?

_____ °

1 mark

16. The table shows the temperatures in 10 cities on a day in December.

City	Temperature in °C
Athens	18
Barcelona	16
Berlin	7
Brussels	8
Dublin	9
Geneva	6
Madrid	12
Moscow	2
Paris	6
Rome	19

(a) Which temperature was the **mode**?

_____ °C

1 mark

(b) In a different city, the temperature was **5°C lower** than in **Moscow**.

What was the temperature in this city?

_____ °C

1 mark

17. Write two numbers that add to 10

One of the numbers must be **positive**.

The other number must be **negative**.

$\square + \square = 10$

1 mark

18. Work out the following.

1.2×6

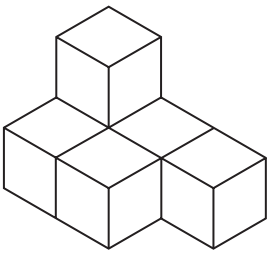
1 mark

$1.2 \div 6$

1 mark

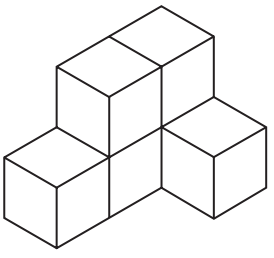
19. Each shape in this question is made from **six cubes**.

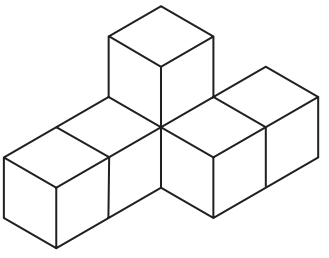
Look at this shape.

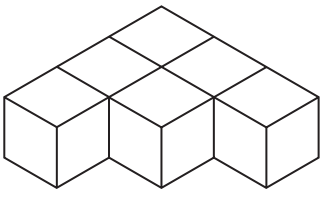


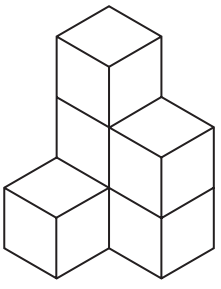
Which **two** of the diagrams below show the **same** shape?

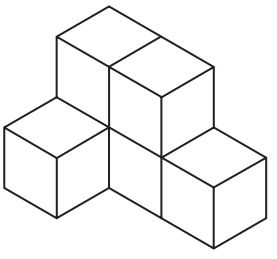
Tick (✓) them both.











1 mark

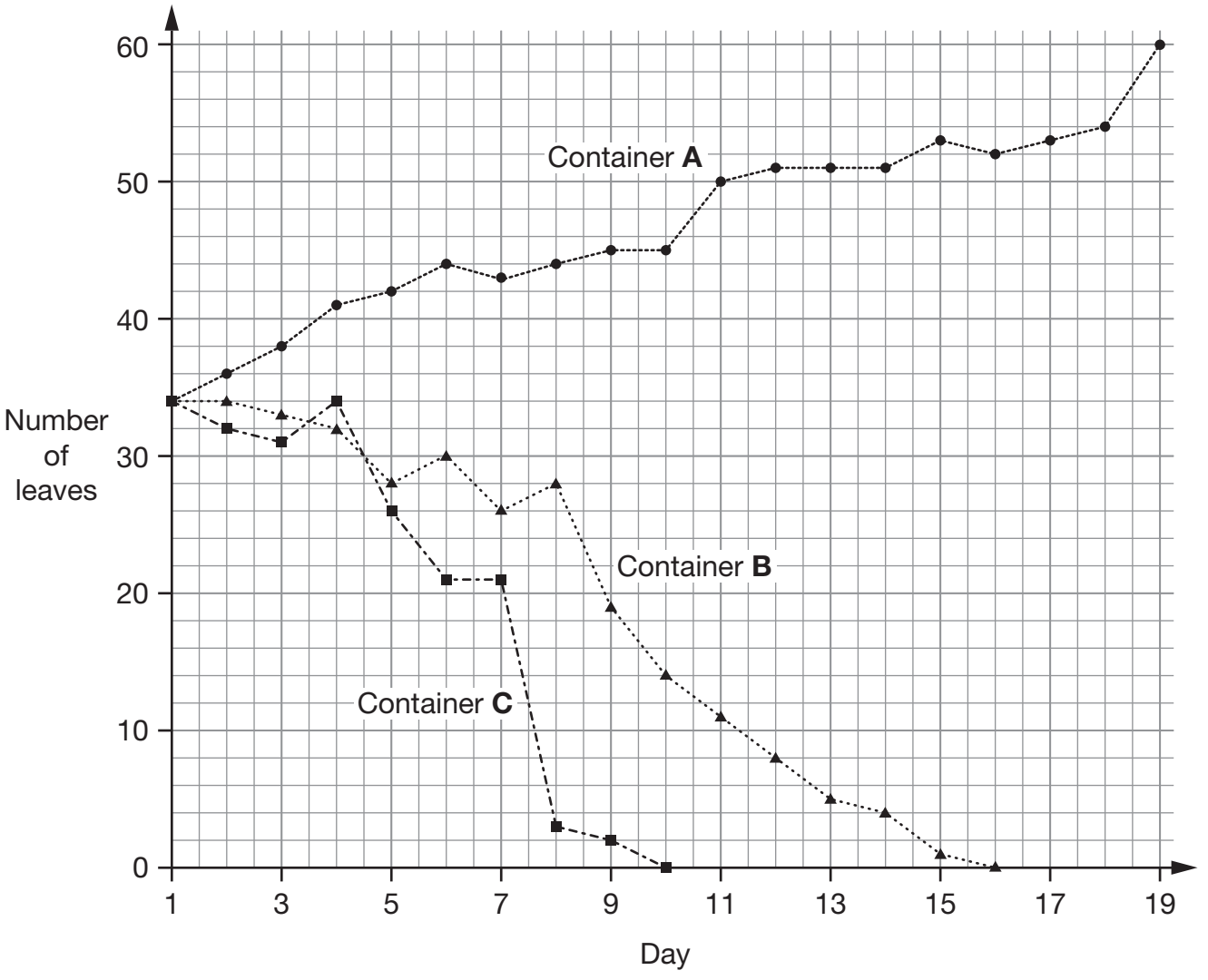
20. Duckweed is a plant that grows in water.

Pupils added **different amounts of salt** to three identical containers of water.

In each container they put some duckweed plants.

Then they recorded the number of leaves on the plants every day.

Results:



Key:

A: No salt

B: Small amount of salt

C: Large amount of salt

(a) How many leaves were in each container on day **1**?

_____

1 mark

(b) In container **A**, how many **more** leaves were there on day **19** than on day **1**?

_____

1 mark

(c) Duckweed plants with no leaves are dead.

On which day did the pupils record that the plants in container **B** were dead?

Day _____

1 mark

(d) How did the amount of salt affect the **change** in the number of leaves?

1 mark

21. Write **numbers** in the boxes to make the statements true.

When $x =$ ☐ then $x + 3 =$ ☐

When $x =$ ☐ then $3x =$ ☐

When $x =$ ☐ then $\frac{x}{3} =$ ☐

2 marks

22. Boxes of tins are delivered to a shop.

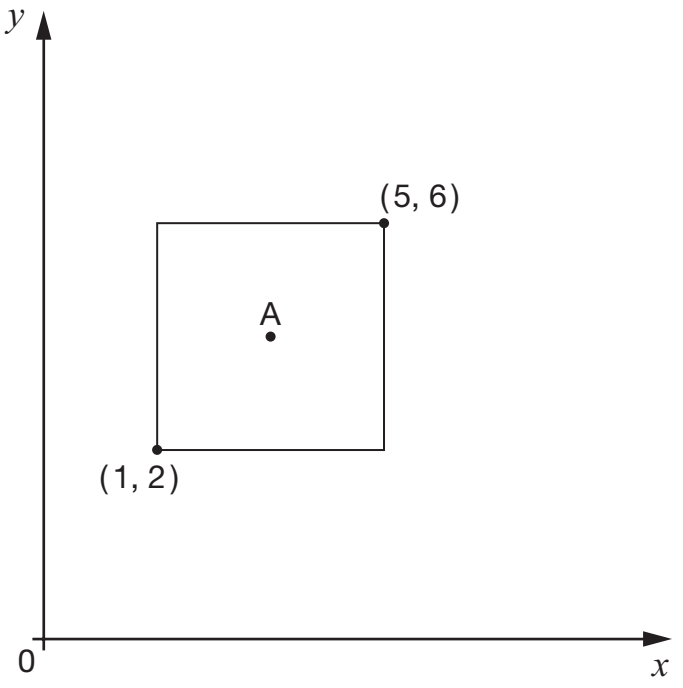
There are **37 boxes**.

Each box contains **25 tins**.

How many tins are there?

2 marks

23. Look at the square drawn on the graph.



Not drawn accurately

Point A is the centre of the square.

What are the coordinates of point A?

A is (_____ , _____)

2 marks

24. (a) Write the correct numbers in the gaps below.

$1 \times 3\frac{1}{2} = 3\frac{1}{2}$

$2 \times 3\frac{1}{2} = 7$

$3 \times 3\frac{1}{2} = 10\frac{1}{2}$

$4 \times 3\frac{1}{2} =$ _____ 1 mark

$5 \times 3\frac{1}{2} =$ _____ 1 mark

$6 \times 3\frac{1}{2} = 21$

Use the table to help you work out this calculation.

$60 \times 3\frac{1}{2} =$ _____ 1 mark

(b) Is the answer to **11 × $3\frac{1}{2}$** a **whole number**?

☐ Yes ☐ No

Explain your answer.

1 mark

25. Find the values of x

$5x - 3 = 12$

$x =$ _____

1 mark

$13 + 2x = 3$

$x =$ _____

1 mark

END OF TEST