Pack A

Practice National Curriculum Test

Key stage 2

Mathematics

Paper 2: reasoning

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	

School name	

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Please do not write on this page.

Instructions

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

Questions and answers

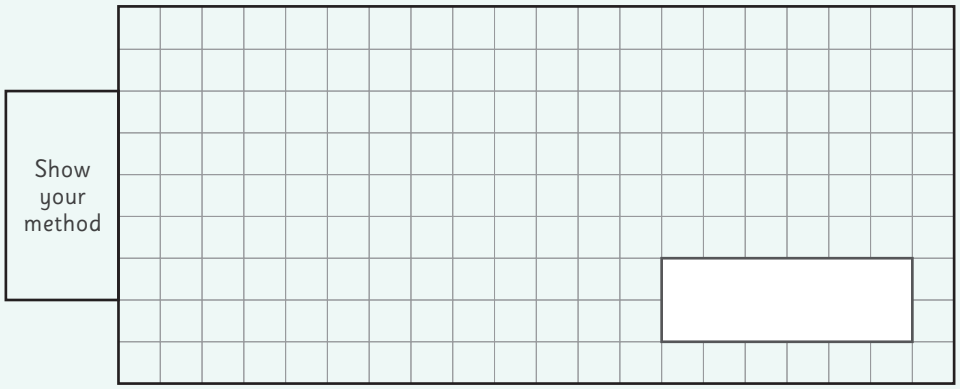
You have **40 minutes** to complete this test.

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.

Some questions have a method box like this:



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 box at the side of the page tells you the number of marks available for each question.

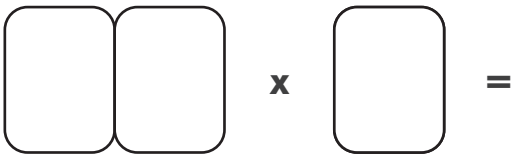
1 Circle the number that is **10 times greater** than seven hundred and three.

703 703,000 7,003 7,030 730

1 mark

2 Below are some digit cards.

Use each of them once to make the multiplication with **greatest result**.



1 mark

3 Circle **three** numbers that add to make a **multiple of 10**.

15 26 62 39 41 24 28

1 mark

4 The distance from Leeds to Manchester is 45 miles.

What is the distance from Leeds to Manchester in **kilometres**?

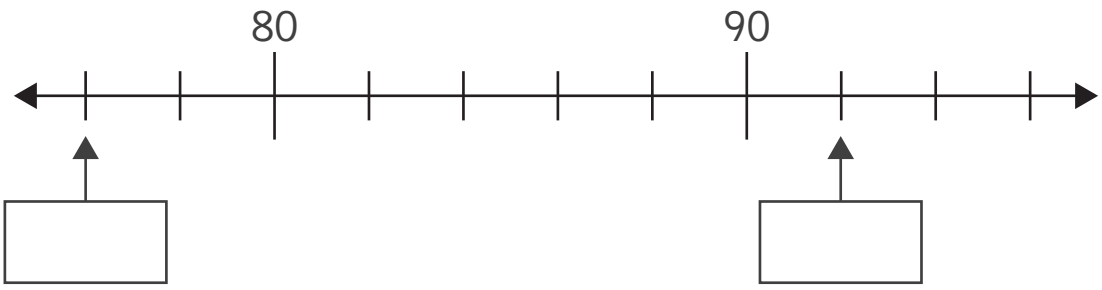
Use 8 kilometres equals 5 miles.

km

1 mark

5 Here is part of a number line.

Write the two missing numbers in the boxes.



2 marks

6 Write these masses in order, starting with the **lightest**.

152 g	1.5 kg	0.15 kg	1,520 g

lightest

1 mark

7 The table below shows the scores of **five** children on a test.

Child	Score
Shen	82
James	76
Amy	94
Ben	85
Sarah	68

What is the mean score of the children?

☐ **1 mark**

8 Tick (✓) two cards that add to make $\frac{4}{5}$

☐ $\frac{4}{5}$ ☐ $\frac{2}{5}$ ☐ $\frac{1}{10}$ ☐ $\frac{3}{10}$ ☐ $\frac{1}{2}$ ☐ $\frac{3}{4}$

☐ **1 mark**

9 A bookshop takes inventory of their books.

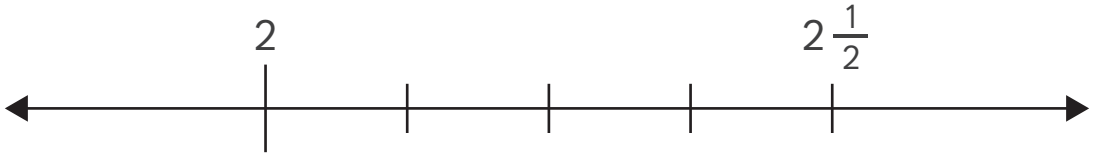
They have 456 non-fiction books, 273 fiction books and 87 children's books.

They sell $\frac{1}{4}$ of all of their books.

How many books do they have left?

1 mark

10 Here is part of a number line.

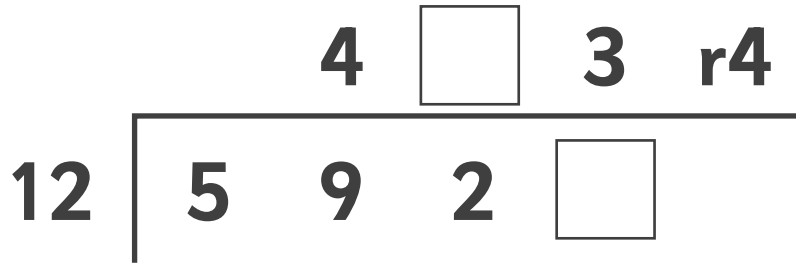


Circle all the numbers below that fall on the part of the number line shown.

$2\frac{1}{4}$ $2\frac{5}{8}$ $2\frac{1}{8}$ $2\frac{3}{4}$

1 mark

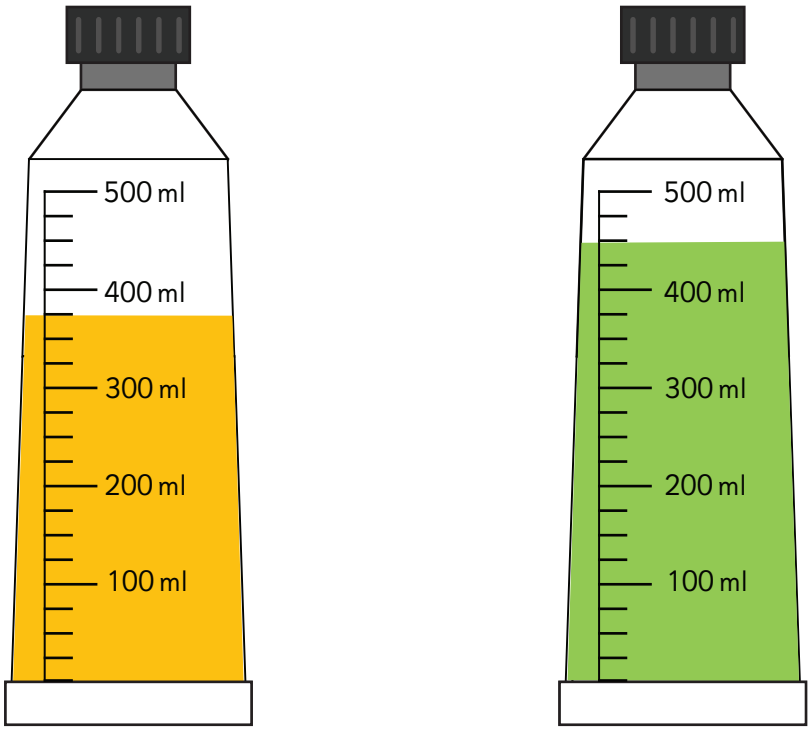
11 Write the two missing digits to make this division correct.



□

2 marks

12 Ben has two bottles of paint.



How much more green paint does he have than yellow paint?

ml

1 mark

13 A rabbit jumped 2.8 metres in one jump.

It then jumped 86cm <u>further</u> than its previous jump.

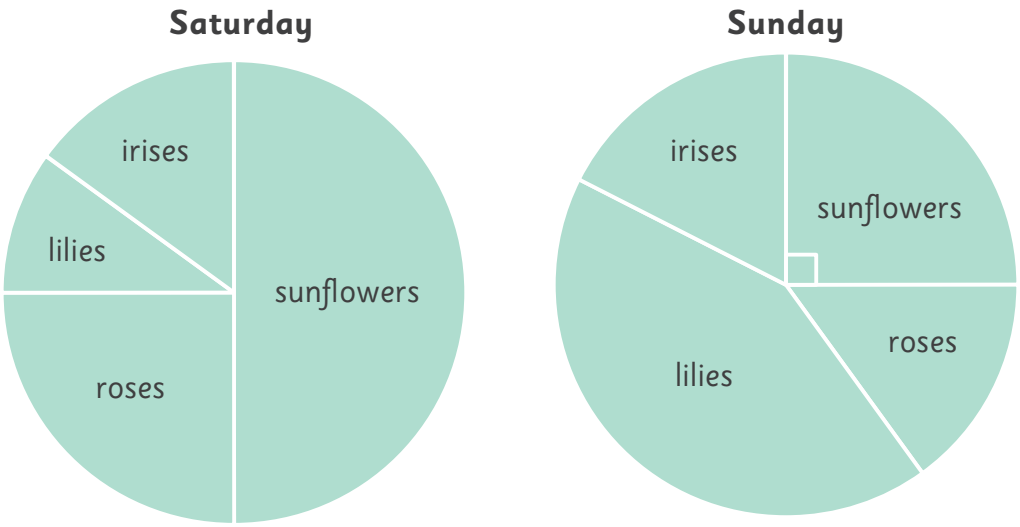
How far did the rabbit jump in its second jump in **metres**?

m

1 mark

14 A flower shop records how many of each flower they sold on Saturday and Sunday.

They sold **80** flowers on Sunday.



They sold the **same** number of sunflowers on Saturday and Sunday.

How many flowers did they sell altogether on Saturday?

1 mark

15 Round 275,984

to the nearest 10 ☐

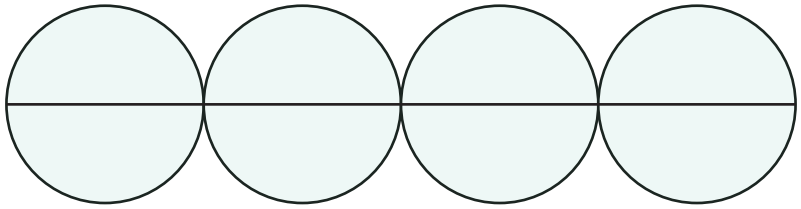
to the nearest 100 ☐

to the nearest 1,000 ☐

☐ **2 marks**

16 Four beads are strung together.

The radius of one bead is **8mm**.



What is the total length of the beads?

☐ mm ☐ **1 mark**

17 Here are some number cards.

23	35	8	96

Use each number card **once** to make the answer to each calculation **the same**.

9	+		=	
	÷	3	=	
4	x		=	
	–	3	=	

1 mark

18 Here is part of a train timetable from Guildford to Oxshott.

Guildford	08:41	09:23	09:55	10:19
Clandon	08:48	09:29	10:07	10:31
Horsley	08:55	09:36	10:16	10:42
Effingham	09:00	09:41	10:23	10:47
Oxshott	09:11	09:49	10:35	11:04

How many minutes does it take the 09:23 train from Guildford to reach Oxshott?

minutes

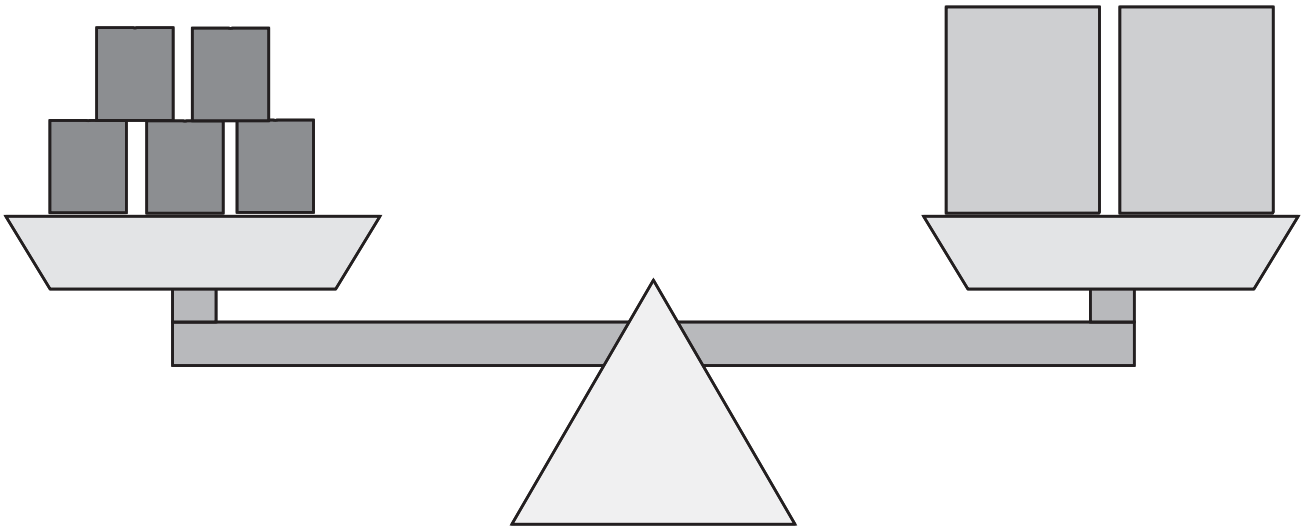
1 mark

James gets to Horsley at 10:20.

What is the **earliest** time he can arrive in Effingham on the train?

1 mark

19 Five small parcels have the same mass as two large parcels.



One large parcel has a mass of 2.4 kg.

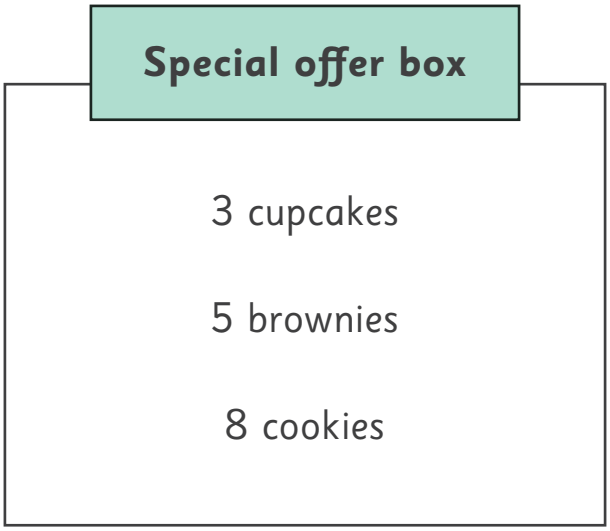
What is the mass of one small parcel in **grams**?

Show your method

g

2 marks

20 A bakery sells a mixture of baked goods in boxes.



James wants **112** baked goods.

How many special offer boxes does he need?

1 mark

Inaya buys **14** special offer boxes.

How many **more** cookies does she have than brownies?

1 mark

21 A florist sells bunches of flowers in vases.

She charges 60p per flower and £2.50 for the vase.

This formula helps her work out what to charge for a vase of flowers.

Cost = number of flowers x 60p + £2.50 vase

How much will a vase of 11 flowers cost?

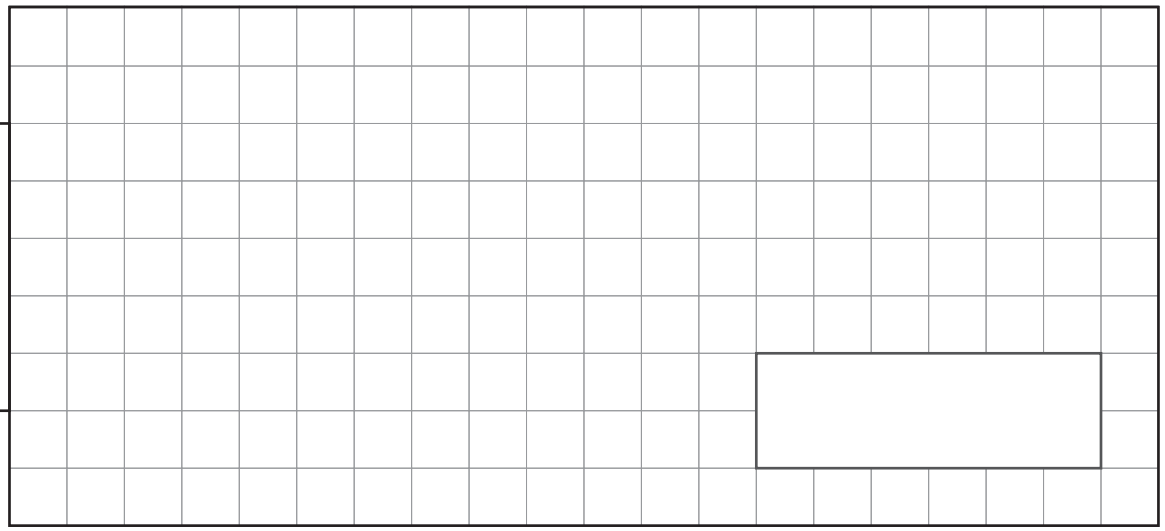
£ ☐

1 mark

Abdul buys a vase of flowers for £11.50.

How many flowers did he have in his vase?

Show your method



☐

2 marks

22 James and Inaya each have a bag of sweets.

Each bag has the same number of sweets.

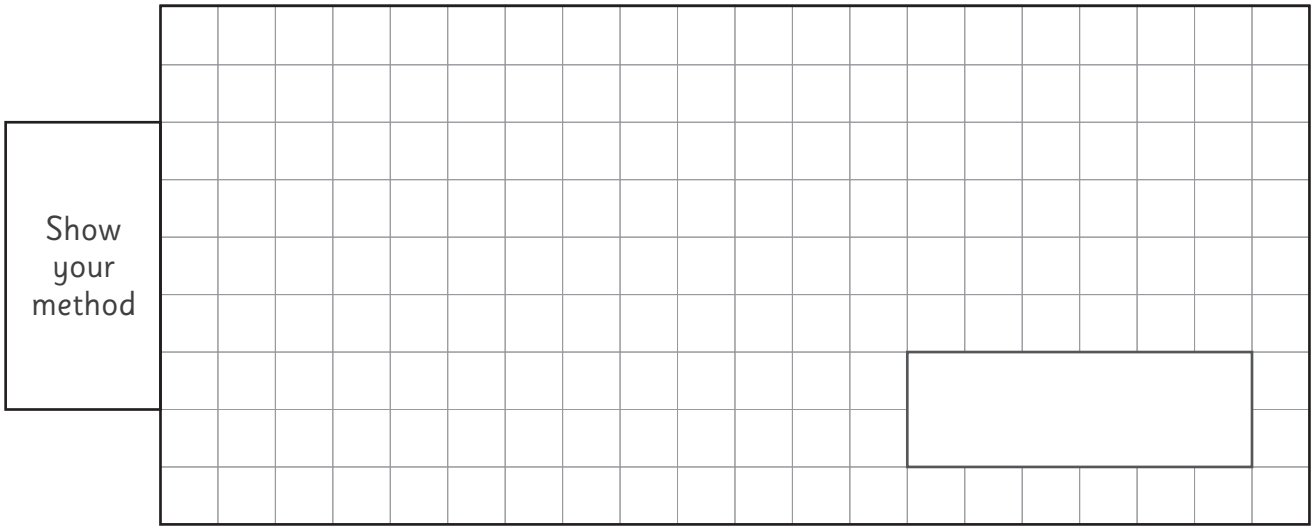
In James's bag, there are 3 red sweets for every 1 blue sweet.

In Inaya's bag, there are 4 red sweets for every 2 blue sweets.

James's bag contains 27 red sweets.

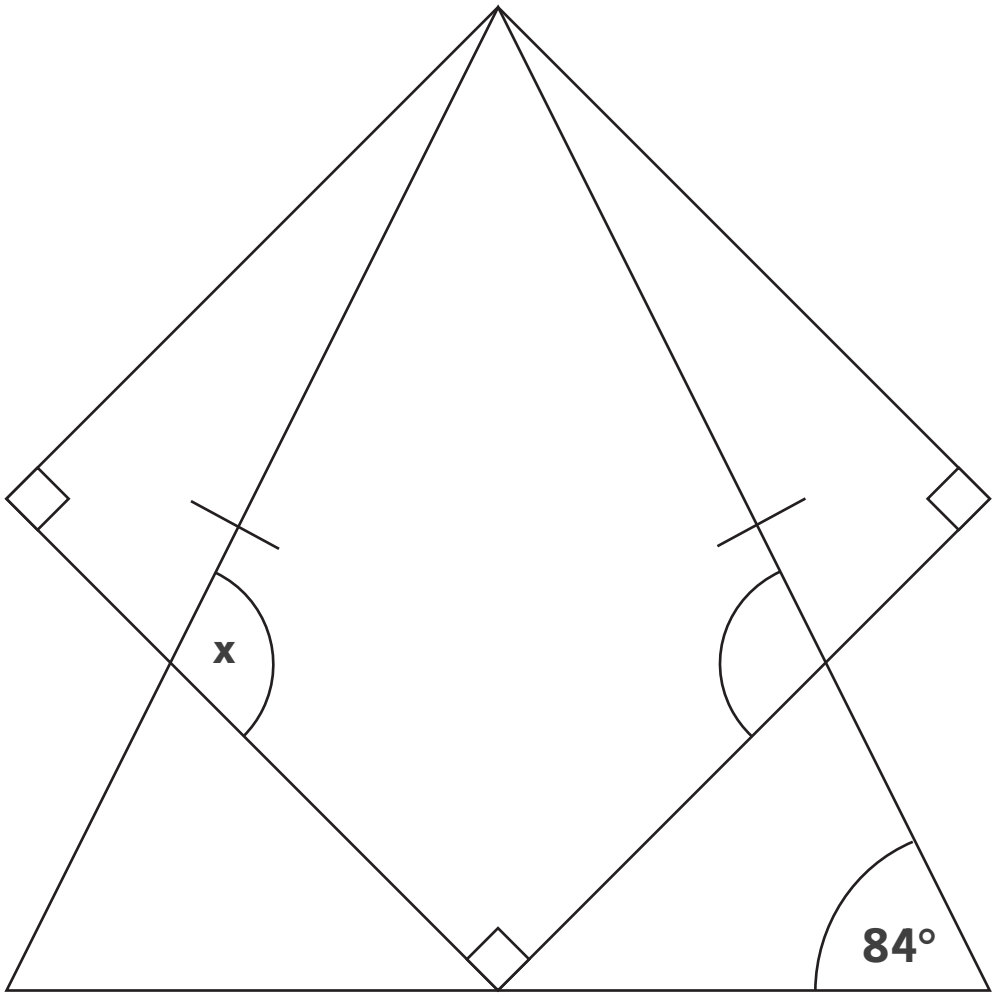
How many red sweets does Inaya's bag contain?

Show your method



2 marks

23 Here is a diagram made of a square and an isosceles triangle.



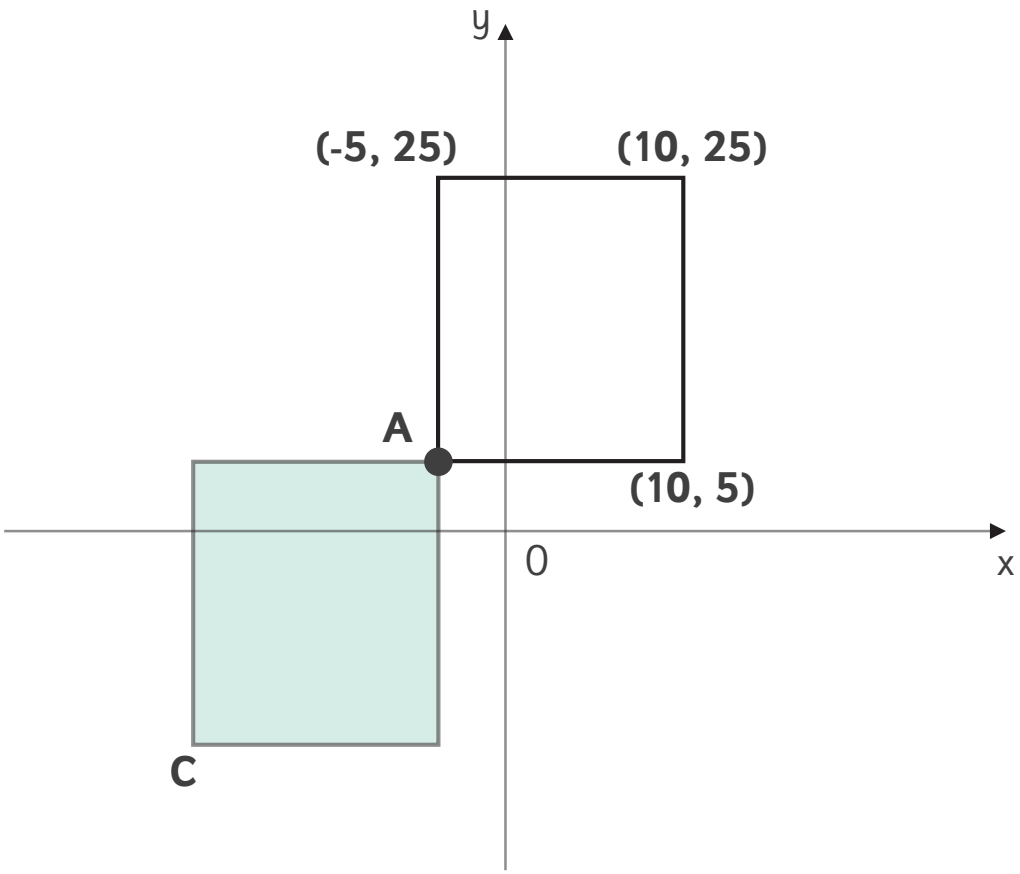
Calculate the size of angle **x** in the diagram.

Show your method

2 marks

24 A shape is drawn on the coordinate axes.

The shape is translated and the shaded shape shows it in its new position.



Write the coordinates of points A and C.

A = (,) **1 mark**

C = (,) **1 mark**