Key Stage 3 2006

MATHEMATICS

Modified large print

Tier 3-5 Paper 2

CALCULATOR ALLOWED

Please read this page and pages 2 and 3. Do not look at the rest of the test paper 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 _____

Total Marks ☐

Note to markers:
This paper should be marked using the MODIFIED LARGE PRINT mark scheme amendments.

302900/562

REMEMBER

The test is 1 hour long plus your additional time allowance.

You may use a calculator for any question in this test.

You will need: pen, pencil, rubber, ruler, tracing paper and mirror (optional) and a calculator.

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.

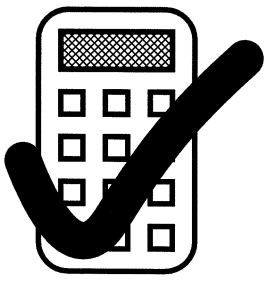
INSTRUCTIONS

Answers



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

Calculators

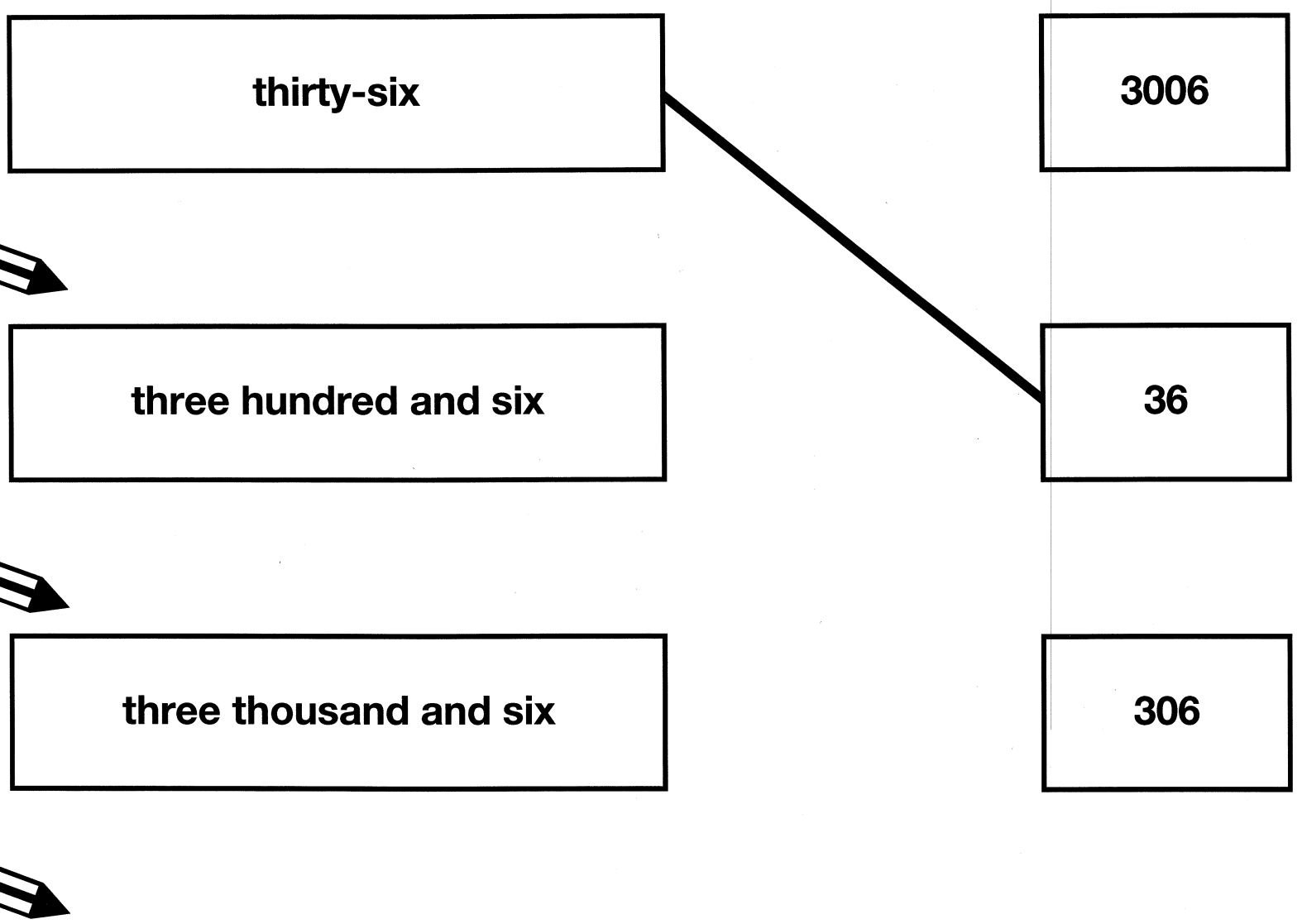


You MAY use a calculator to answer any question in this test.

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1. **Draw lines to match the words to the correct numbers.**

The first one is done for you.





2. **There are 9 pupils in a group.**

The table on the opposite page gives information about them.

Use the table to answer these questions.

(a) **How many girls are in this group?**



_____

(b) **Whose birthday is one day after Alex Alcroft's birthday?**



_____

(c) **Who is the oldest boy in the group?**



_____

(d) **A new pupil, Sue Li, joins the group.**

She was born exactly 1 month after Laura Miller.

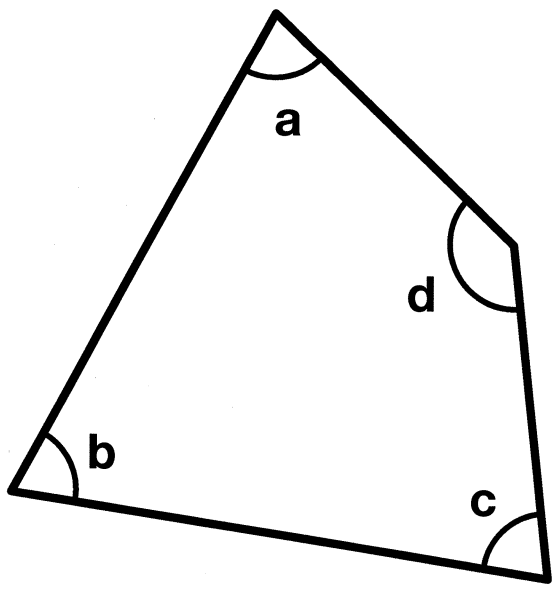
What is Sue's date of birth?



_____

First name	Last name	Male or Female?	Date of birth
Alex	Alcroft	M	20.11.92
Helen	Brooks	F	10.01.93
Huw	Davies	M	21.11.92
Ben	Howard	M	24.06.93
Laura	Miller	F	07.12.92
Surjit	Sandhu	F	03.01.93
Jade	Smith	F	04.09.92
Leroy	Taylor	M	06.10.92
Claire	White	F	23.09.92

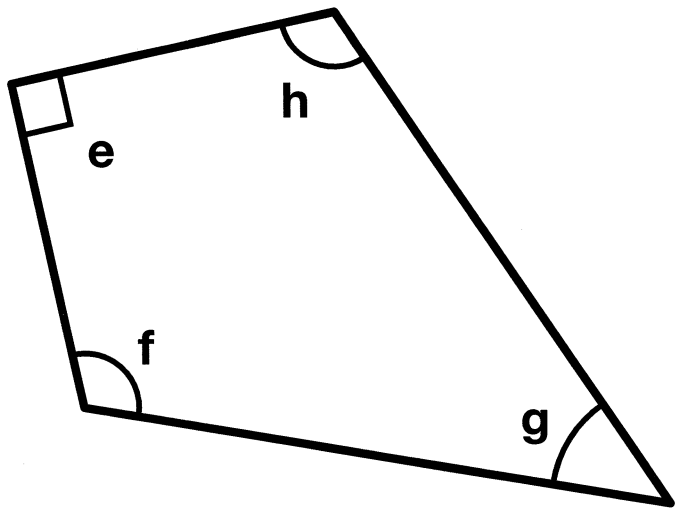
3. (a) **Look at this quadrilateral.**



Which angle is biggest? Tick (✓) the correct box below.

- ☐ **Angle a**
- ☐ **Angle b**
- ☐ **Angle c**
- ☐ **Angle d**

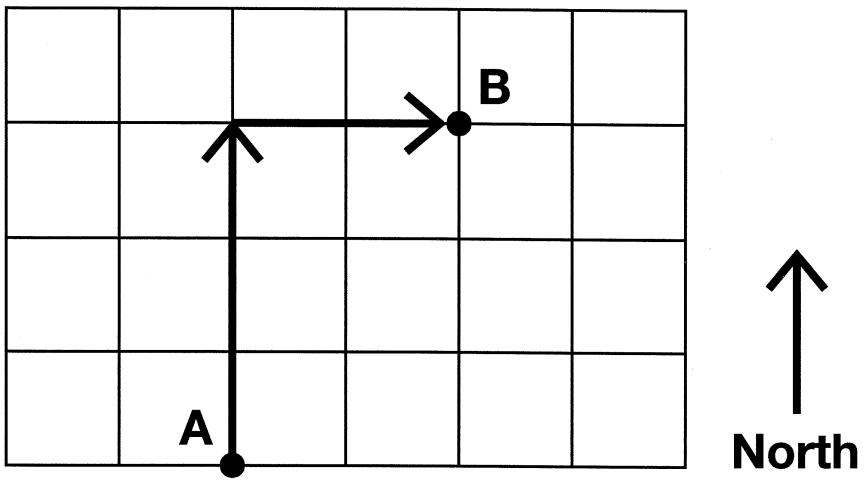
(b) Now look at this quadrilateral.



Angle e is marked with straight lines.

What does this tell you about the angle?

4. This grid shows points A and B

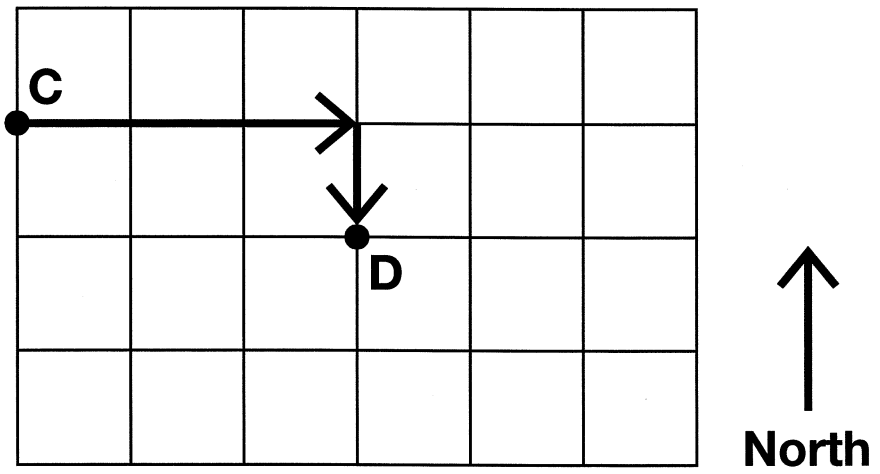


To move from A to B on the square grid:

move North 3

then East 2

(a) This grid shows points C and D.



Write the missing direction.

To move from C to D on the square grid:

move East 3

then _____

(b) Write the missing directions.

To move around the four sides of a square on the square grid:

move West 1

then _____

then _____

then _____

5. **A shop sells birthday cards.**

Each card has a code that shows the price.
This table shows the prices.

Code	Price of card
A	95p
B	£1.25
C	£1.65
D	£1.95
E	£2.35

(a) Karen pays for two cards.

One card has code A on it.

The other has code C.

Altogether, how much does Karen pay?



£ _____

(b) Tariq pays for two cards.

Both cards have code D on them.

Tariq pays with a £10 note.

How much change should he get?

£ _____

(c) Greg pays for two cards.

Altogether he pays £3.60

What could the codes on Greg's cards be?
There are two different answers. Write them both.

The codes could be _____ and _____ , or

the codes could be _____ and _____

6. **Five people played each other at tennis.**

The table below shows who won each game.

For example, when Bob played Ann, Bob won.

	Ann				
Ann	✘	Bob			
Bob	Bob	✘	Carl		
Carl	Ann	Carl	✘	Dan	
Dan	Ann	Dan	Carl	✘	Ed
Ed	Ann	Bob	Carl	Dan	✘

(a) **Ann played four games.**

How many games did she win ?



_____

(b) **Write the name of the person who lost all their games.**



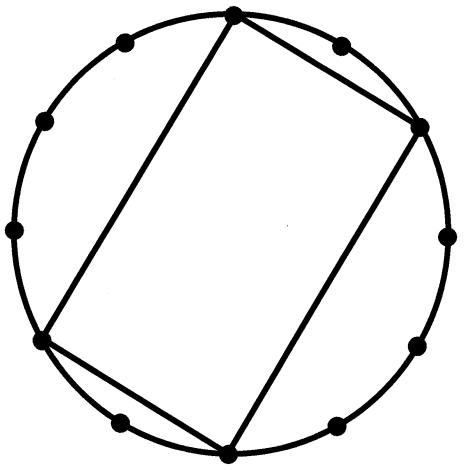
_____

(c) Explain why there is a cross (✘) in some of the boxes.

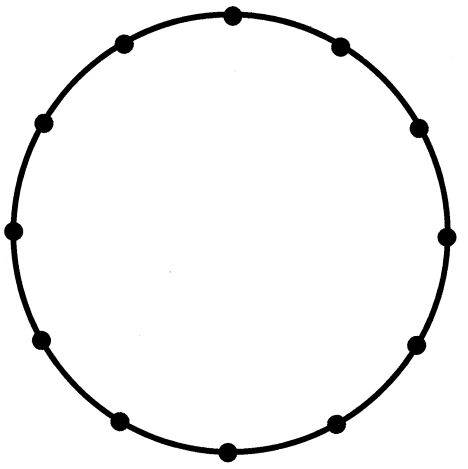


7. **There are twelve points marked around the circle shown below. The points are equally spaced.**

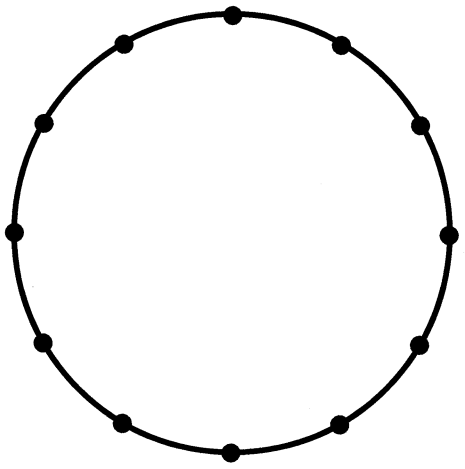
You can join 4 points to make a rectangle.



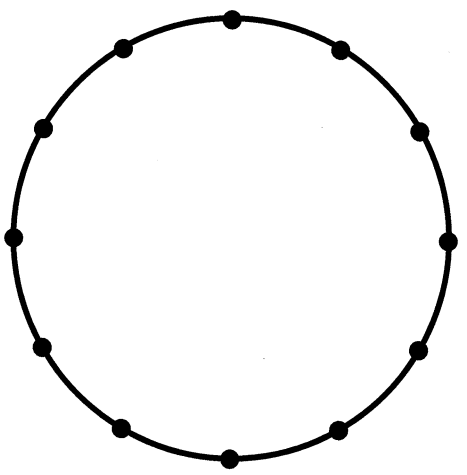
(a) Join 4 points to make a square.



(b) Join 3 points to make an equilateral triangle.

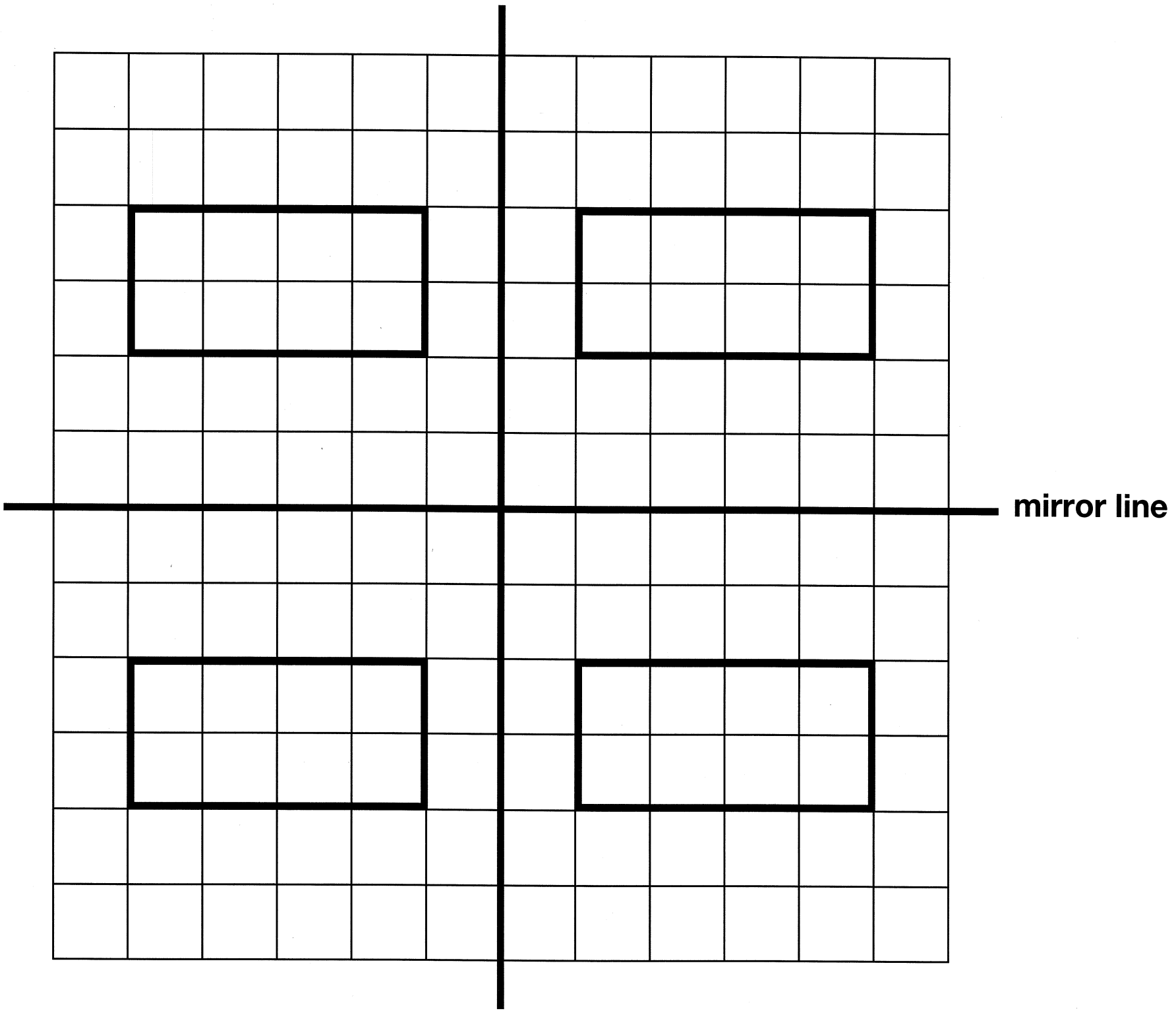


(c) Join a different set of 3 points to make an isosceles triangle.

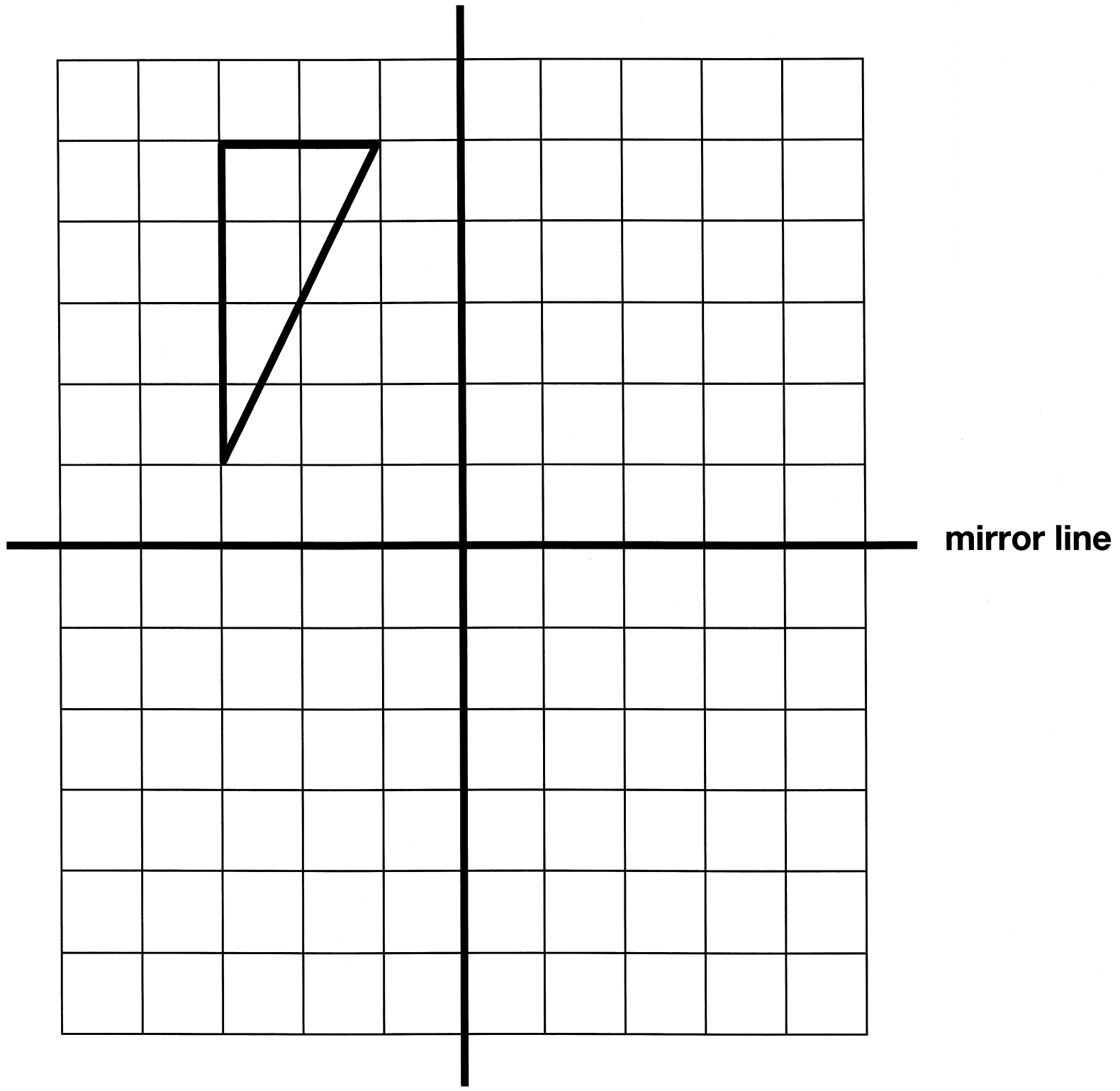


8. You have a shape for this question.

This square grid shows a rectangle reflected in two mirror lines.



On the square grid below, show the triangle reflected in the two mirror lines.



9. (a) **These rules show how to get from one number to the next in these sequences.**

Use the rules to write the next two numbers in each sequence.

Rule: Add 8			
4	**12**	.....	.....

Rule: Multiply by 3			
4	**12**	.....	.....

Rule: Divide by 4 then add 11			
4	**12**	.....	.....

(b) **A sequence of numbers starts like this:**

30 22 18

Could the rule be Subtract 8? Tick (✓) Yes or No.

☐ **Yes** ☐ **No**

Explain your answer.

10. A bottle contains 250 ml of cough mixture.

The information on the label is

Adult – take 10 ml four times a day.

Child – take 5 ml four times a day.

One adult and one child need to take cough mixture 4 times a day every day for 5 days.

Will there be enough cough mixture in the bottle?

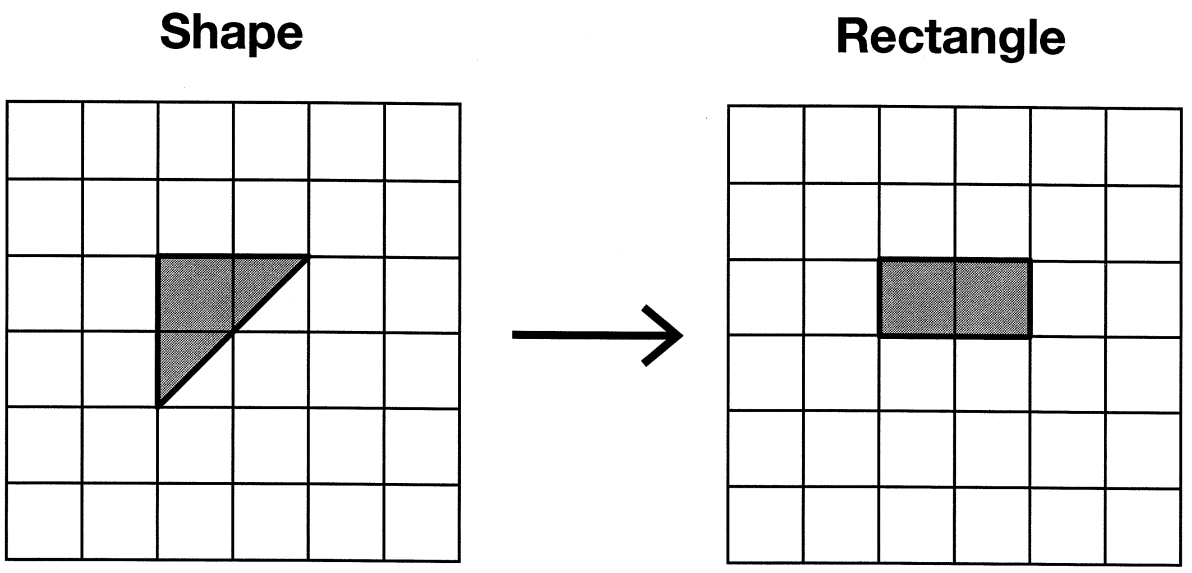
Explain your answer.

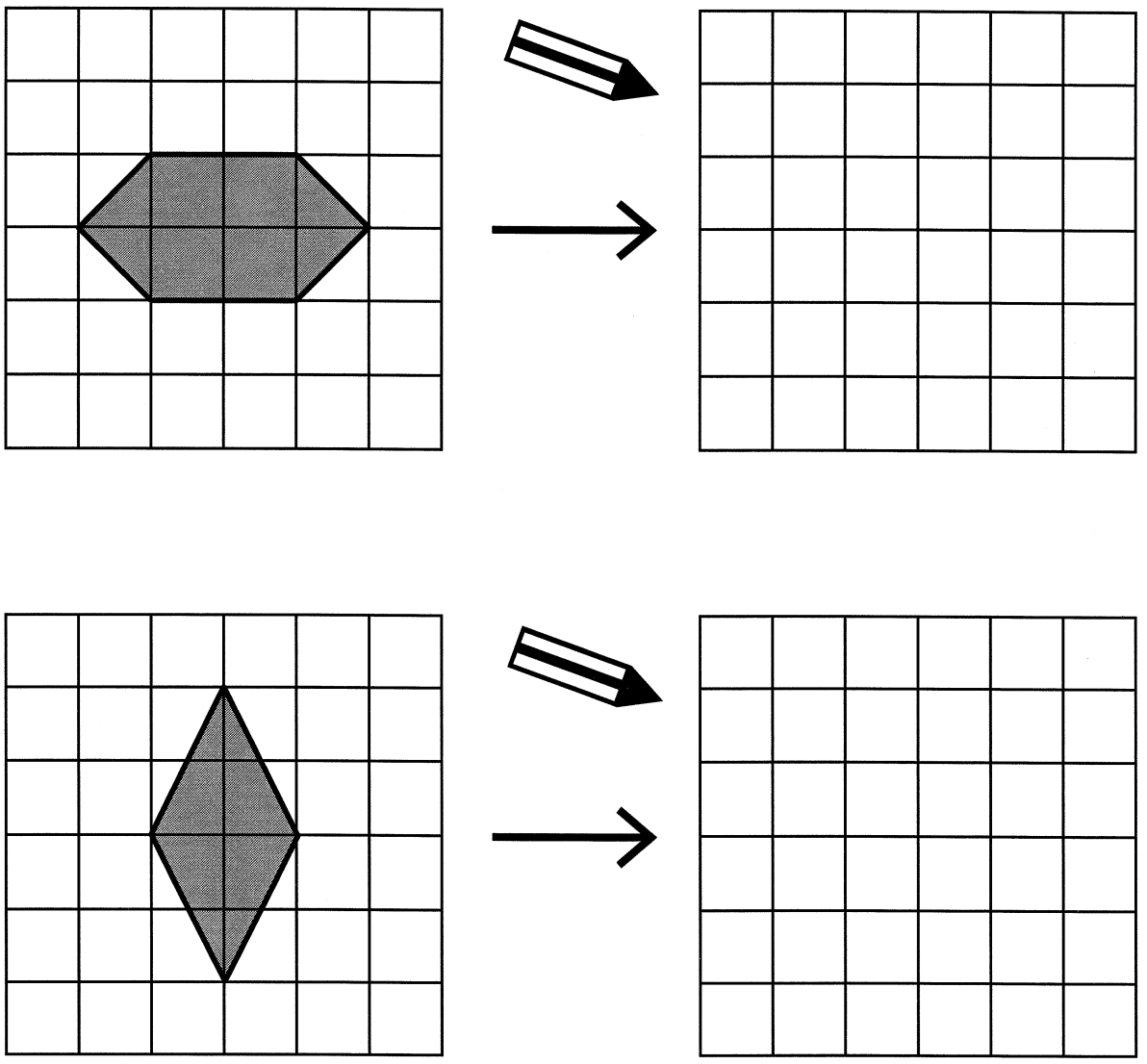


11. **The grids in this question are centimetre square grids.**

For each shape on the left, draw a rectangle that has the same area.

The first one is done for you.





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TURN OVER FOR THE NEXT QUESTION

12. **This table shows the average length of pregnancy for different mammals.**

Mammal	Average length of pregnancy
Dolphin	276 days
Horse	337 days
Seal	350 days
Whale	365 days
Camel	406 days
Elephant	640 days

Use the information in the table to answer these questions.

(a) Which mammal has an average length of pregnancy of 1 year?



_____

(b) Which mammal has an average length of pregnancy of 50 weeks?



_____

(c) **A human has**
an average length of pregnancy of about 9 months.

Which other mammal also has
an average length of pregnancy of about 9 months?



_____

13. **Write the missing numbers in the boxes.**



$4 \times \square + 20 = 180$



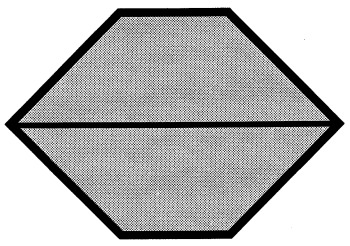
$4 \times 20 + \square = 180$

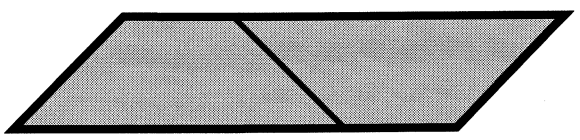


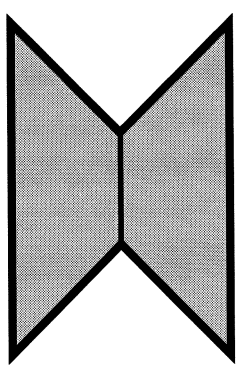
$4 \times \square - 20 = 180$

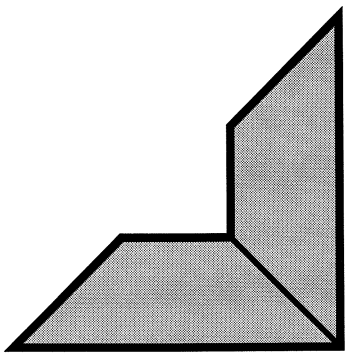
14. I use two congruent trapeziums to make the shapes below.

Tick (✓) all the shapes that are hexagons.









15. **The pupils in a class had a sponsored swim.**

They collected £429.24

(a) **How much is £429.24 to the nearest one hundred pounds?**



£ _____

(b) **How much is £429.24 to the nearest ten pounds?**



£ _____

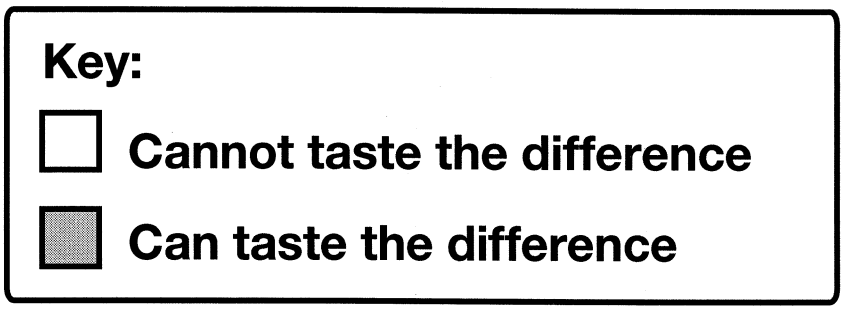
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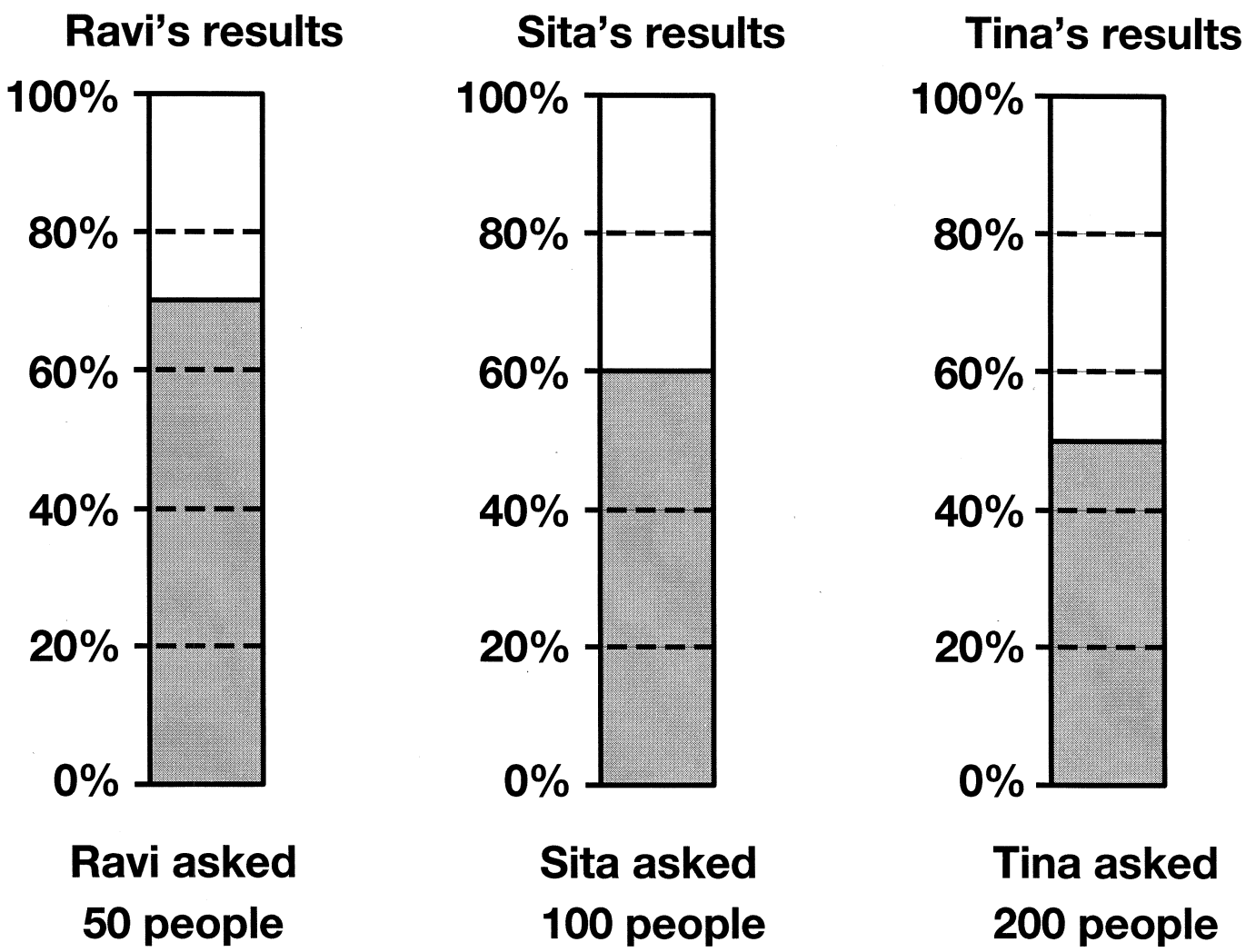
TURN OVER FOR THE NEXT QUESTION

16. **Wine gums are sweets that are made in different colours.**

Pupils tested whether people can taste the difference between black wine gums and other wine gums.

The percentage bar charts below show three pupils' results.





(a) Complete this table. (There are six missing numbers.)

	Number of people who were tested	Number of people who can taste the difference	Number of people who cannot taste the difference
Ravi	50		
Sita	100		
Tina	200		

(b) Explain why Tina's results are likely to be more reliable than Ravi's or Sita's.



17. **Look at the three expressions below.**

$8 + k$	$3k$	k^2

When k = 10, what is the value of each expression?



$8 + k =$ _____

$3k =$ _____

$k^2 =$ _____

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TURN OVER FOR THE NEXT QUESTION

18. I buy 12 packets of cat food in a box.

This table shows the different varieties in the box.

Variety	Number of packets
Cod	3
Salmon	3
Trout	3
Tuna	3

(a) I am going to take out a packet at random from the box.

What is the probability that it will be cod?



(b) My cat eats all the packets of cod.

I am going to take out a packet at random from the ones left in the box.

What is the probability that it will be salmon?



(c) A different type of cat food has 10 packets in a box.

The probability that the variety is chicken is 0.7

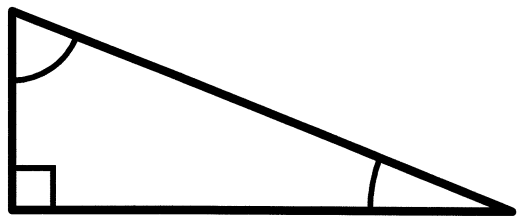
What is the probability that the variety is not chicken?



19. Some statements in the table below are true. Some are false.

Beside each statement, write true or false.
For true statements you must draw an example.

The first one is done for you.

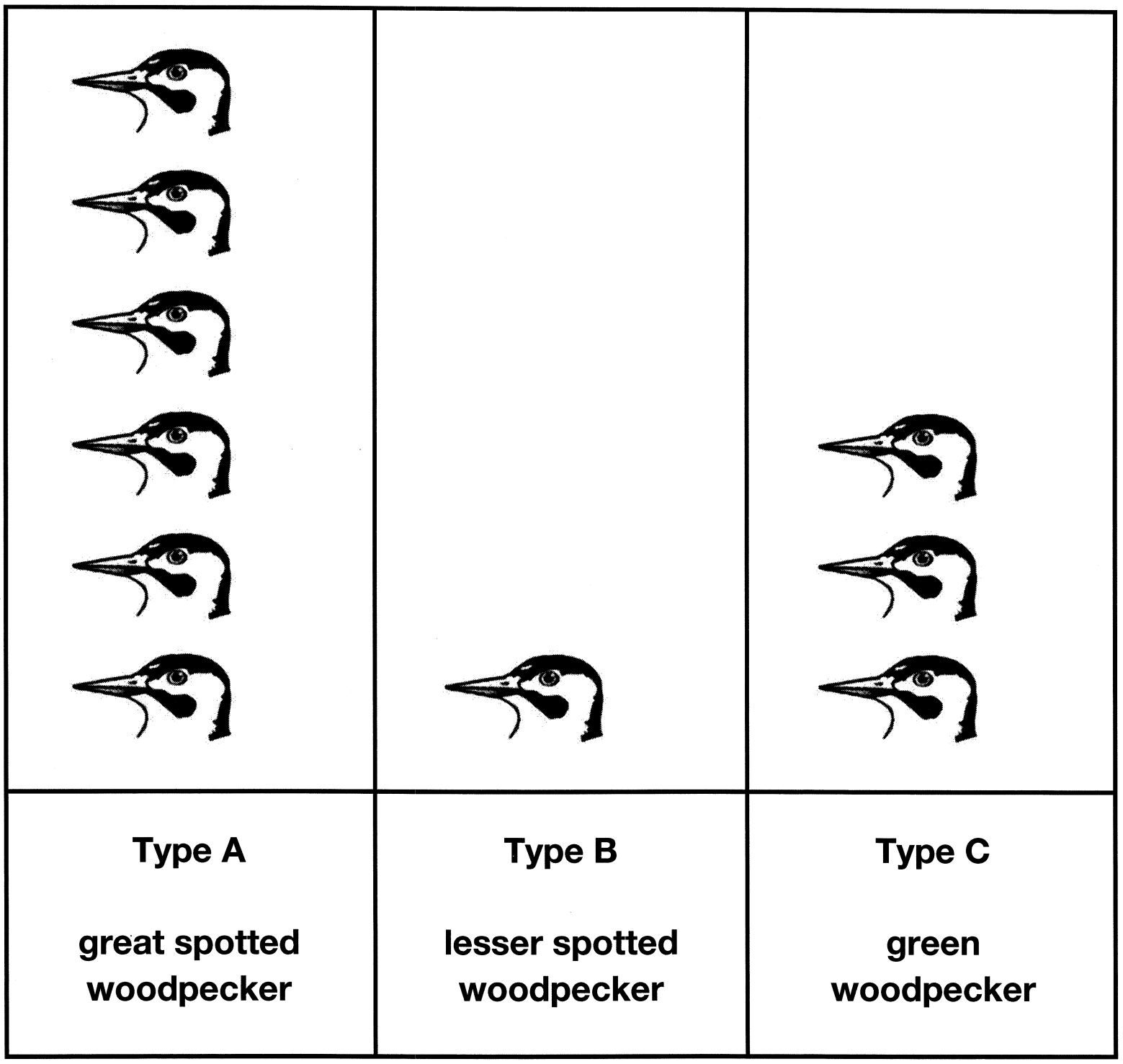
Statement	Write true or false. If true, draw an example.
Some triangles have one right angle and two acute angles.	true 
Some triangles have three right angles.	
Some triangles have three acute angles.	
Some triangles have one obtuse angle and two acute angles.	
Some triangles have two obtuse angles and one acute angle.	

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TURN OVER FOR THE NEXT QUESTION

20. Three different types of woodpecker live in Britain.

The pictogram shows information about the numbers of each type.



Type A	Type B	Type C
great spotted woodpecker	lesser spotted woodpecker	green woodpecker

Key:  **represents 10 000 woodpeckers**

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(a) **Complete the table below to show the percentages of each type of woodpecker.**

Type A	Type B	Type C
_____ %	_____ %	_____ %

(b) **The ratio of type A : type B woodpeckers is 6 : 1**

What is the ratio of type B : type C woodpeckers?

_____ : _____

21. Fill in the missing numbers.



120 mm is the same as _____ cm

120 cm is the same as _____ m

120 m is the same as _____ km

22. **A shop sells toilet rolls.**

You can buy them in packs of 9 or packs of 6

A pack of 9 toilet rolls costs £3.90

A pack of 6 toilet rolls costs £2.50

Which pack gives you better value for money?

You must show your working.



END OF TEST

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