

**2025 national curriculum tests**

# **Key stage 2**

**Mathematics**

## **Paper 2: reasoning**

### **MODIFIED LARGE PRINT**

**First name** \_\_\_\_\_

**Middle name** \_\_\_\_\_

**Last name** \_\_\_\_\_

**Date of birth**    **Day** \_\_\_\_\_ **Month** \_\_\_\_\_ **Year** \_\_\_\_\_

**School name** \_\_\_\_\_

**DfE number** \_\_\_\_\_

#### **Note to markers**

This paper should be marked using the standard mark schemes for KS2 Mathematics: Paper 2. There is additional guidance on marking some questions in this paper in the Key stage 2 Mathematics amendments to mark schemes – MLP document.

# Instructions

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

## Questions and answers

You have **40** minutes, plus your additional time allowance, 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 any space on the page.

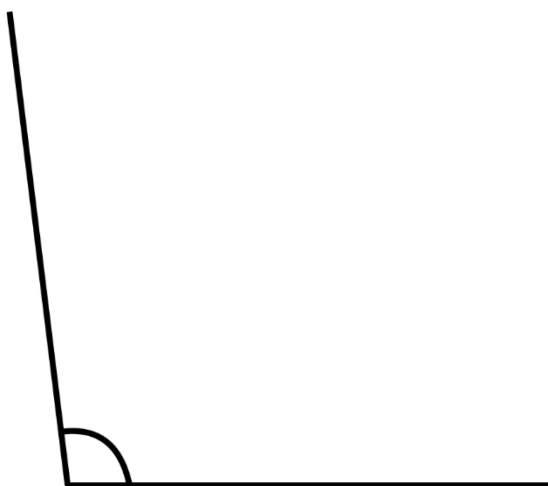
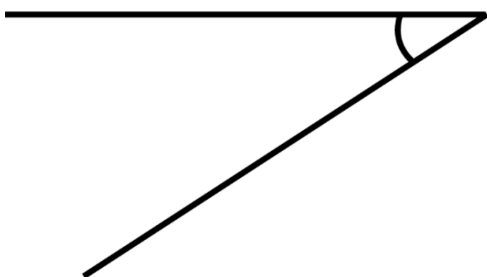
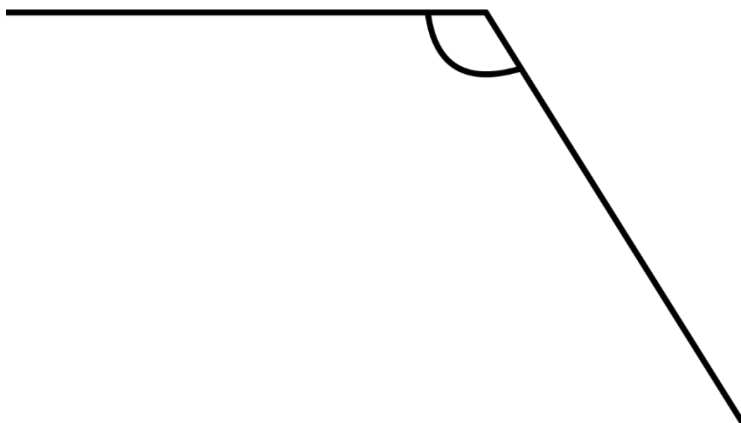
## Method questions

Some questions say: ‘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.**

1. Look at the four angles below.  
Tick or mark the angle that is closest  
in size to a right angle.



2. Look at the diagram below. It shows part of a number grid with some missing numbers.

Add 1 000 →

Add 100 ↓

<b>P</b>			
<b>5 350</b>	<b>6 350</b>		
<b>5 450</b>	<b>6 450</b>	<b>7 450</b>	
		<b>7 550</b>	<b>Q</b>

Write the missing numbers **P** and **Q**.

**P** \_\_\_\_\_

**Q** \_\_\_\_\_

**3. Layla's money**

**£2**

**50p**

**20p**

**Adam's money**

**50p**

**50p**

**50p**

**20p**

**20p**

**How much *more* money does Layla  
have than Adam?**

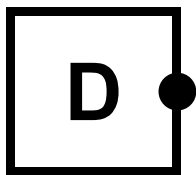
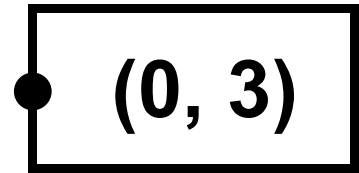
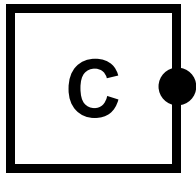
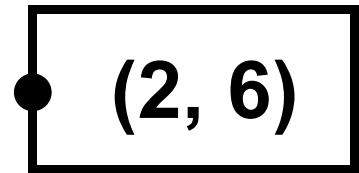
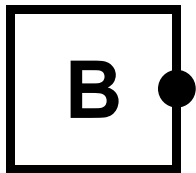
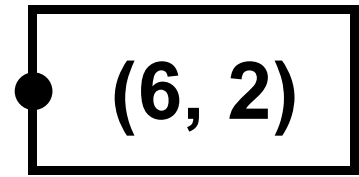
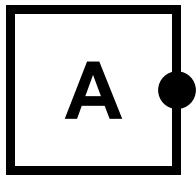
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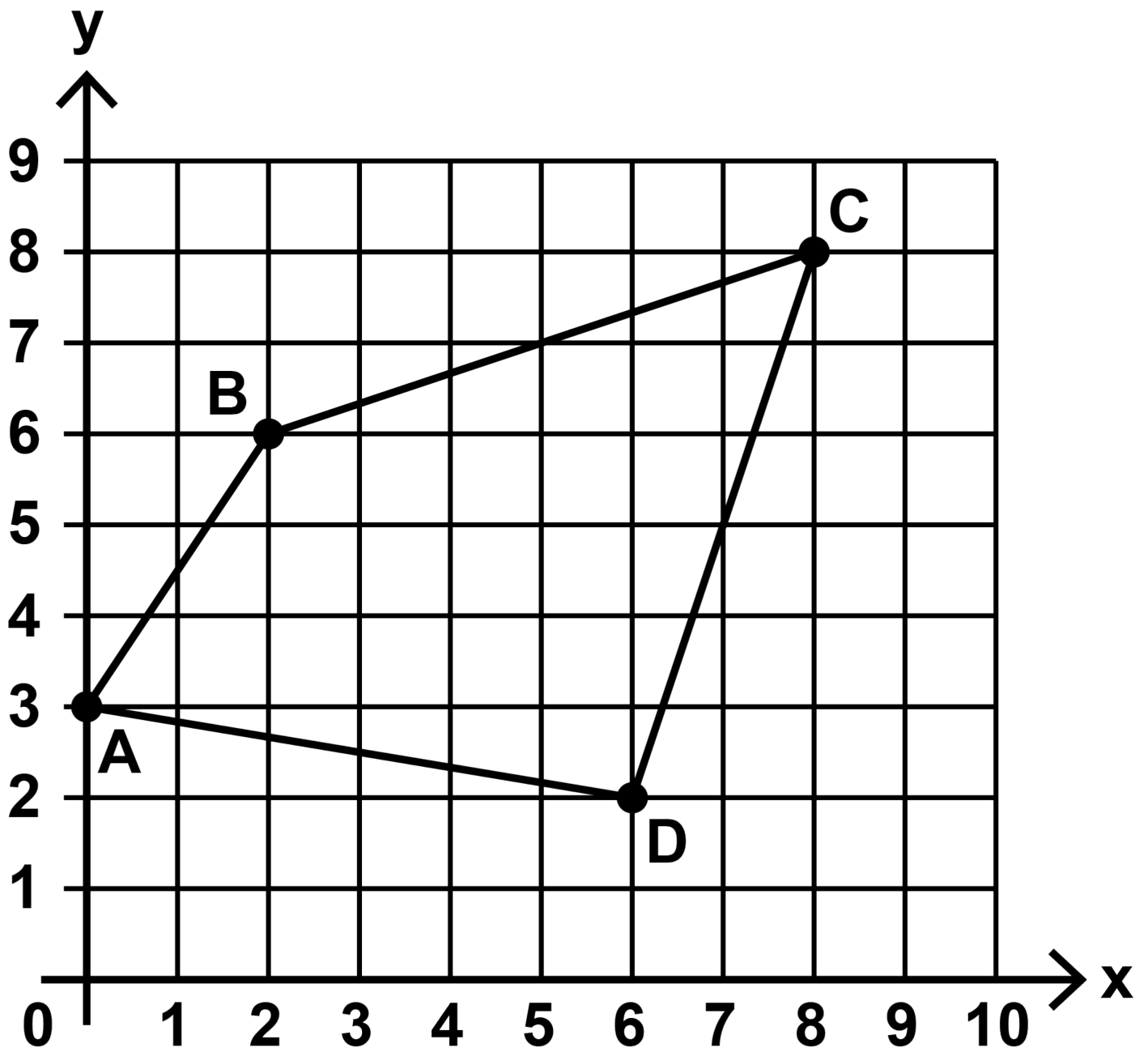
**The test continues on the next page.**

4. Look at the diagram on the opposite page.

Match each point to its coordinates.







- 5. Olivia counts in eights, starting at zero.**

**Tick or mark all the numbers Olivia should say.**

**24**

**42**

**78**

**112**

**6. Look at the number below.**

**5 639 728**

**(a) Which digit is in the hundred thousands place?**

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**(b) Write the number that is two thousand more than 5 639 728**

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**7. Look at the graph on the opposite page. It is for converting kilograms and pounds.**

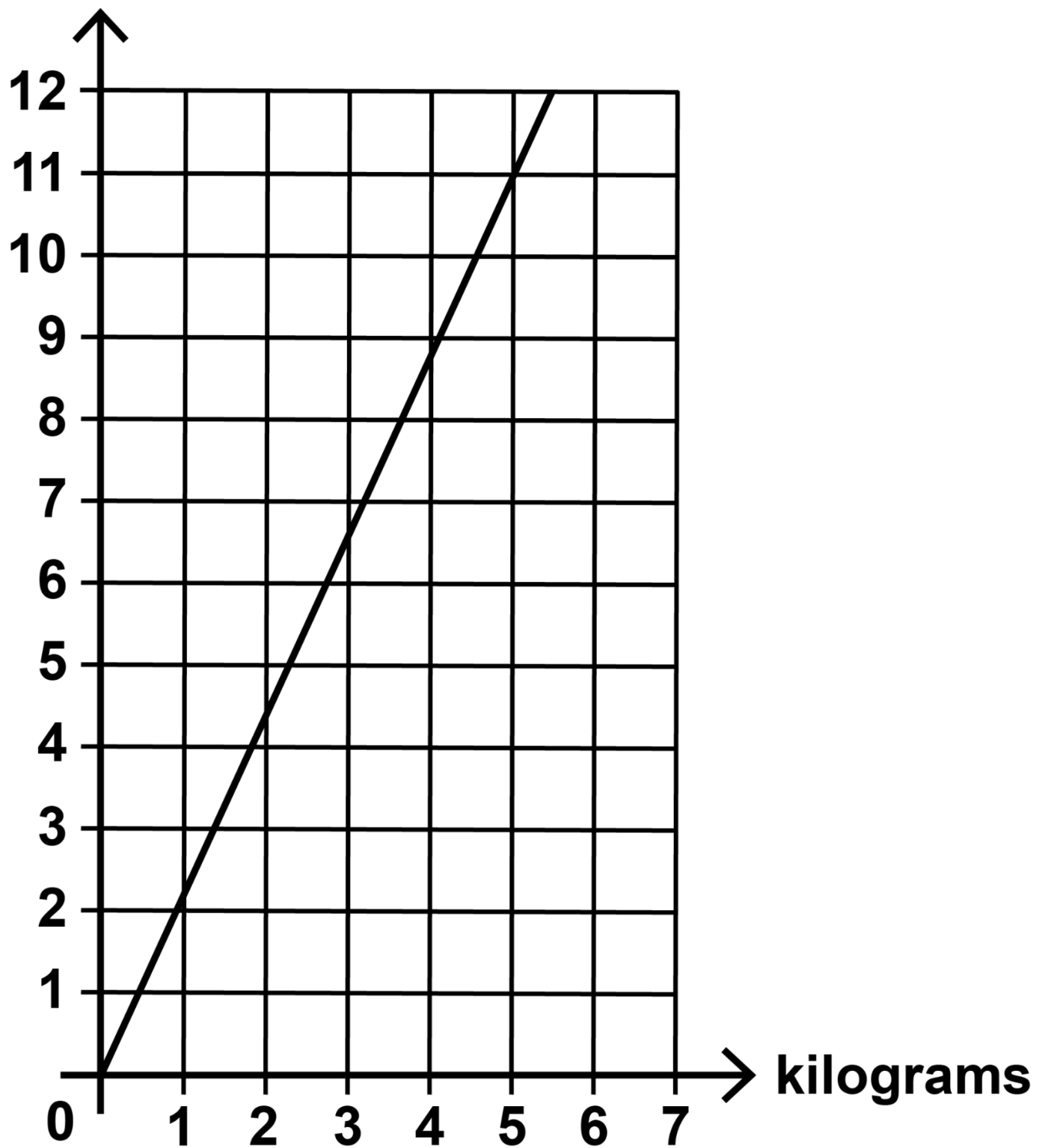
**(a) Use the graph to convert  
5 kilograms to pounds.**

**\_\_\_\_\_ pounds**

**(b) Use the graph to convert  
7 pounds to the nearest  
kilogram.**

**\_\_\_\_\_ kg**

**pounds**



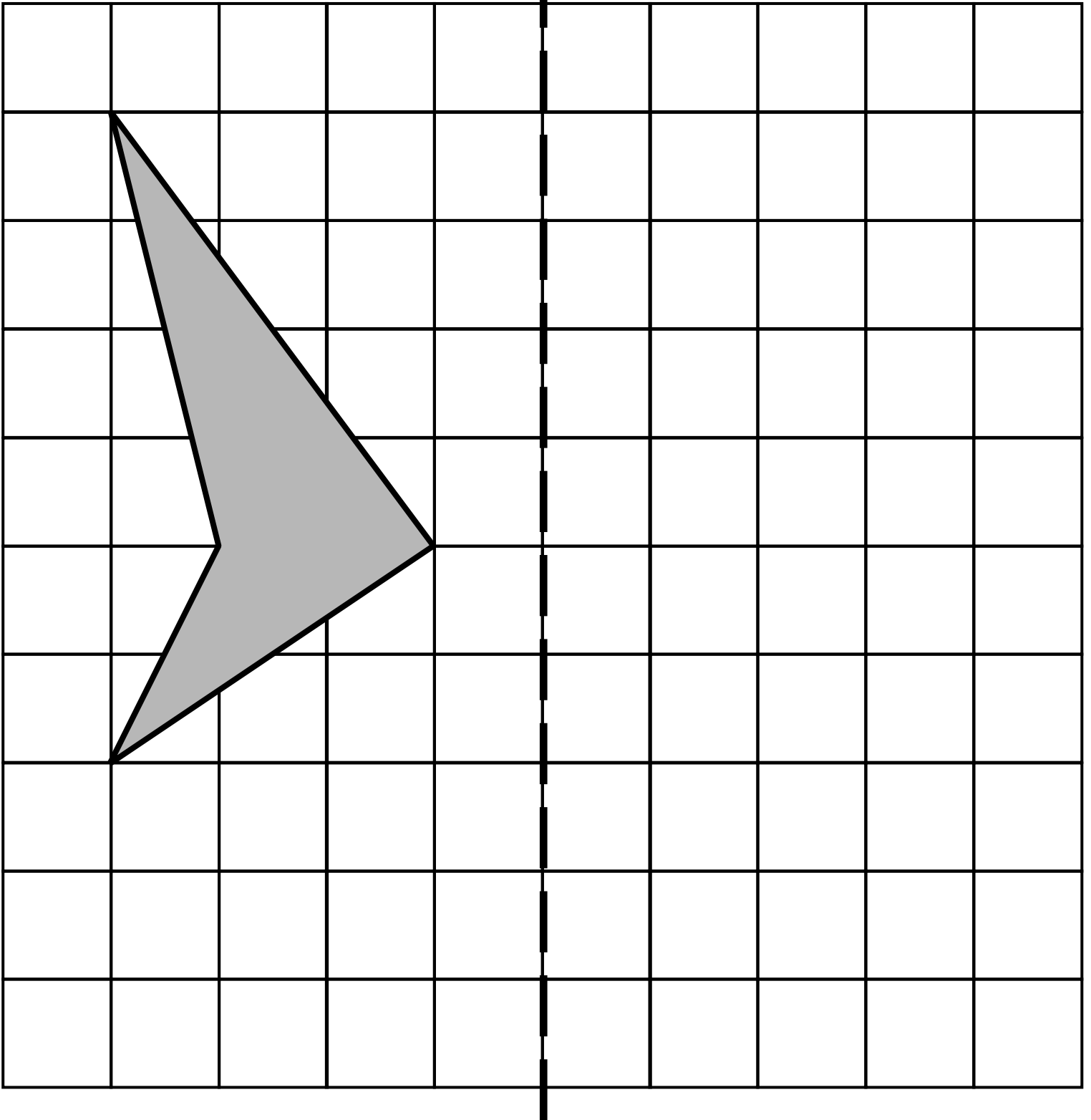
**8. You have a shape for this question.**

**Look at the shape on the opposite page.**

**Draw the reflection of the shaded shape about the mirror line.**

**Use a ruler.**

**mirror line**



- 9. Ali has 35 red counters.  
He divides them into groups of 3**

**What is the greatest number of  
groups of 3 he can make?**

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**Maria has 35 green counters.  
She divides them into groups of 4**

**How many green counters does she  
have left over?**

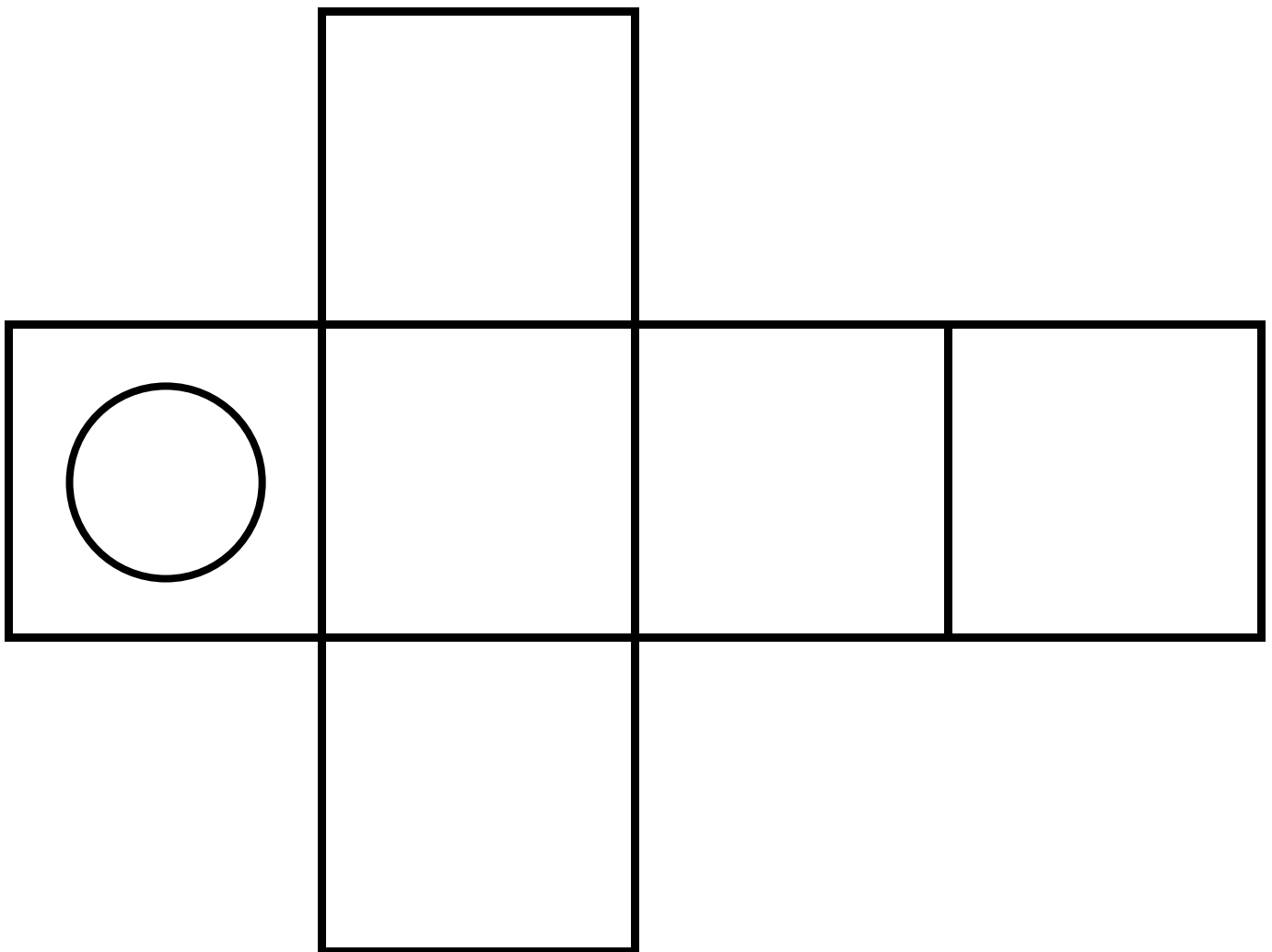
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**10. Olivia is making a cube from a net.**

**She wants the cube to have two circles on opposite faces.**

**Tick or mark the face that Olivia should draw the circle on to complete the net.**



**11. The total distance from Paris to Munich by road is 860 kilometres.**

**There are three sections.**

**The distance from Paris to Metz is 331 km.**

**The distance from Metz to Stuttgart is 295 km.**

**Stuttgart to Munich is the last section.**

**How many kilometres is the last  
section from Stuttgart to Munich?**

**Show your method.**

\_\_\_\_\_ **km**

**12. Amina says 600 millimetres is longer than 1 metre.**

**Amina is not correct.**

**Explain how you know.**

- 13. Jack buys four concert tickets.  
Each ticket costs £28**

**One calculation Jack could use to  
work out the total cost is  
 $28 + 28 + 28 + 28$**

**Tick or mark each calculation below  
that Jack could use to work out the  
total cost.**

$$(20 \times 4) + (8 \times 4)$$

$$(4 \times 20) + 8$$

$$(4 \times 30) - (4 \times 2)$$

$$(4 \times 30) - 2$$

- 14. The table on the opposite page shows the distances Kirsty cycled last week.**

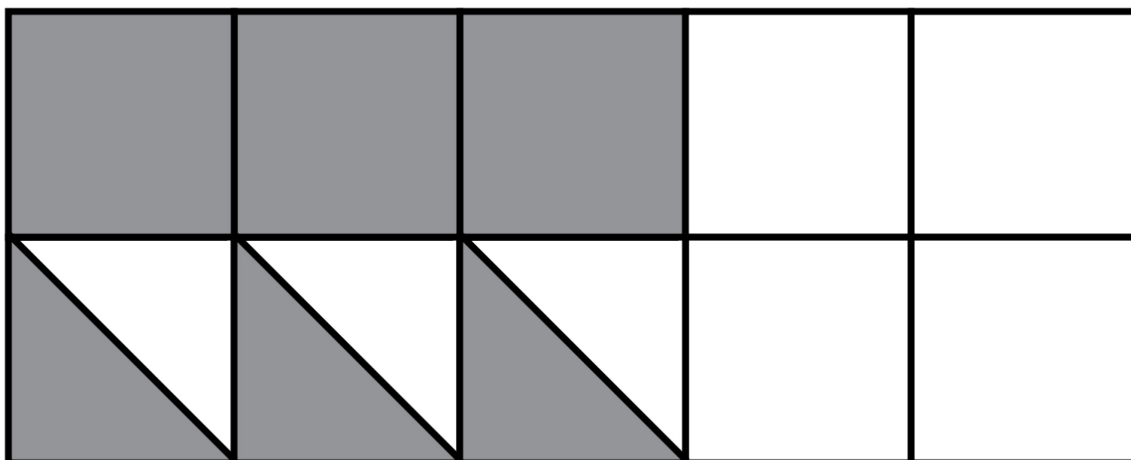
**What is the total distance Kirsty cycled last week?**

**Show your method.**

**\_\_\_\_\_ miles**

<b>Day</b>	<b>Miles</b>		
<b>Monday</b>	<b>4.3</b>	<b>4.3</b>	<b>—</b>
<b>Tuesday</b>	<b>4.3</b>	<b>4.3</b>	<b>—</b>
<b>Wednesday</b>	<b>4.3</b>	<b>2.6</b>	<b>3.1</b>
<b>Thursday</b>	<b>4.3</b>	<b>4.3</b>	<b>—</b>
<b>Friday</b>	<b>4.3</b>	<b>2.6</b>	<b>3.1</b>

15. Here is a diagram made from ten squares.



What percentage of the diagram is shaded?

\_\_\_\_\_ %



**16. There are two boxes.**

**The mass of the first box is**

**$1\frac{1}{4}$  kilograms.**

**The mass of the second box is**

**$1.4$  kilograms.**

**What is the difference in mass of the two boxes?**

**Give your answer in kilograms.**

**Show your method.**

**\_\_\_\_\_ kg**

**17. A 4 kilogram bag of rice costs £6**

**What is the cost of 500 grams of the rice?**

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18. Tick or mark the fractions that are greater than  $\frac{2}{3}$

$$\frac{5}{6}$$

$$\frac{4}{9}$$

$$\frac{9}{12}$$

$$\frac{11}{15}$$

$$\frac{10}{21}$$

**19. The total cost of a school trip for 12 pupils is £780**

**The total cost includes travel, food and hotel.**

**For one pupil, the travel cost is £27 and the food cost is £16**

**How much is the hotel cost for one pupil?**

**Show your method.**

**£ \_\_\_\_\_**

**20. Sophie thinks of two prime numbers.**

**She adds them together.**

**Her answer is 24**

**Write the three different pairs of prime numbers that Sophie could think of.**

**and**

**and**

**and**

**21. The mass of a 1p coin is 3.56 g**

**The mass of a 10p coin is 6.5 g**

**What is the difference in mass  
between £1 in 1p coins and  
£1 in 10p coins?**

**Show your method.**

**\_\_\_\_\_ g**

**22. A cuboid has these measurements:**

**Height: 2 cm**

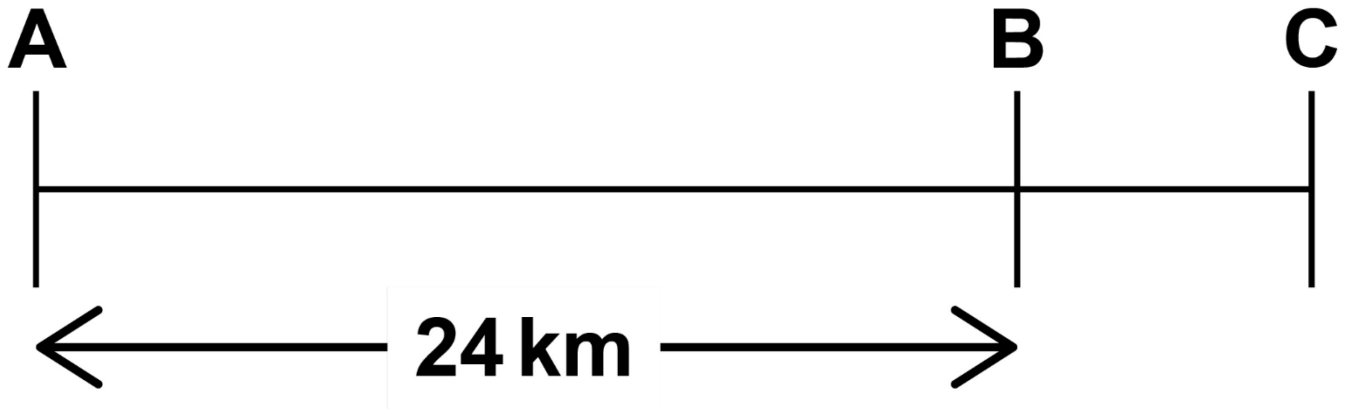
**Length: 12 cm**

**Width:  $1\frac{1}{2}$  cm**

**Calculate the volume of this cuboid.**

**\_\_\_\_\_ cm<sup>3</sup>**

23. Look at the diagram below. It shows a straight line labelled **ABC**.  
It is not to scale.



The distance from **A** to **B** is **24 km**.

The distance from **A** to **B** is  $\frac{3}{4}$  the distance from **A** to **C**.

What is the distance from **B** to **C**?

\_\_\_\_\_ km



**End of test**

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