2024 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.

STA/24/8818/MLe

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.

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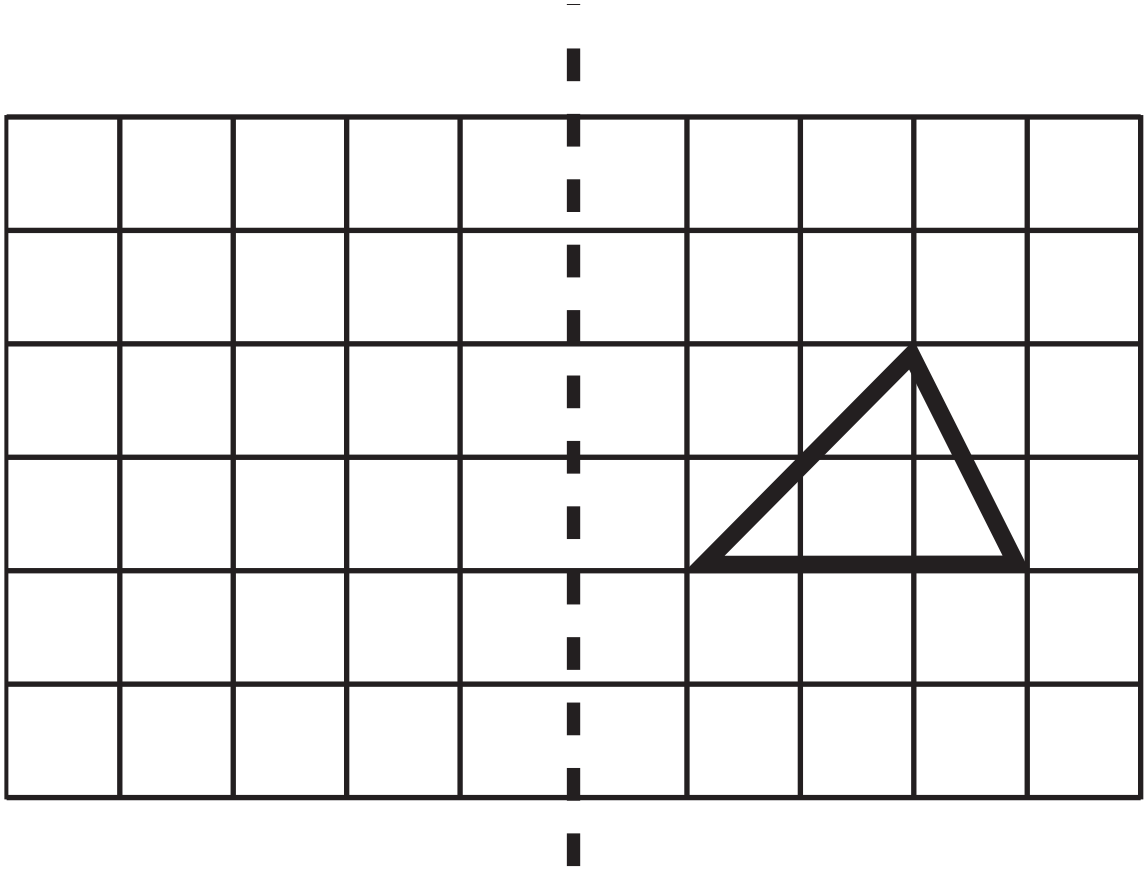
1. **You have a cut–out shape for this question.**

A triangle on a grid is shown below.



Draw the reflection of the triangle in the mirror line.

Use a ruler.

2. The table below shows the cost of fruit at a school cafeteria.

Fruit	Cost for one
banana	12p
plum	23p
apple	32p
pear	38p

Amir buys two pieces of fruit.

He pays with a £2 coin.

He gets £1·50 change.

Tick or mark the two pieces of fruit below that Amir buys.

banana

plum

apple

pear

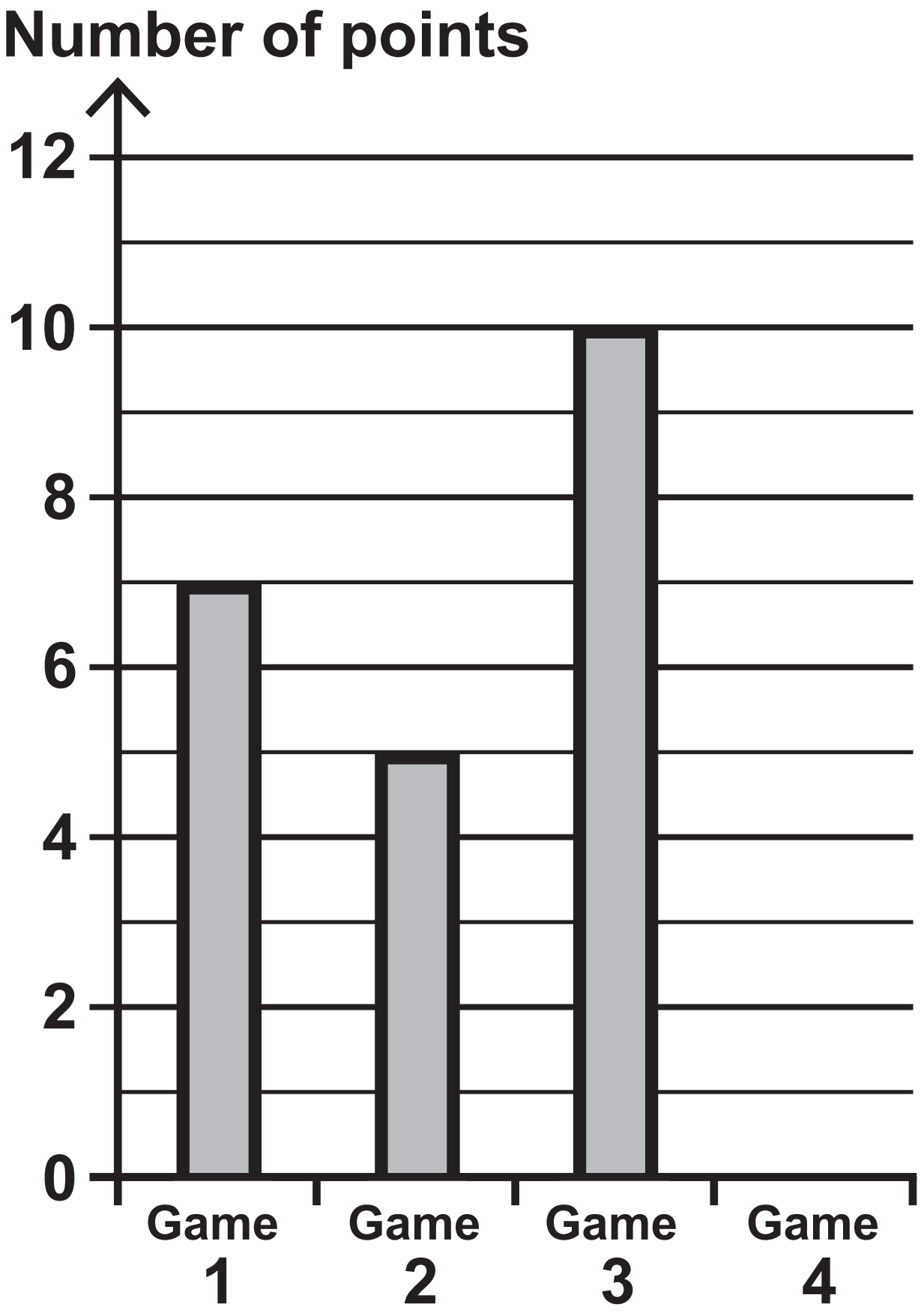
3. **Layla plays basketball.**

The graph on the opposite page shows how many points she scored in her first 3 games.

After 4 games, Layla had scored a total of 25 points.

Complete the graph.

Use a ruler.

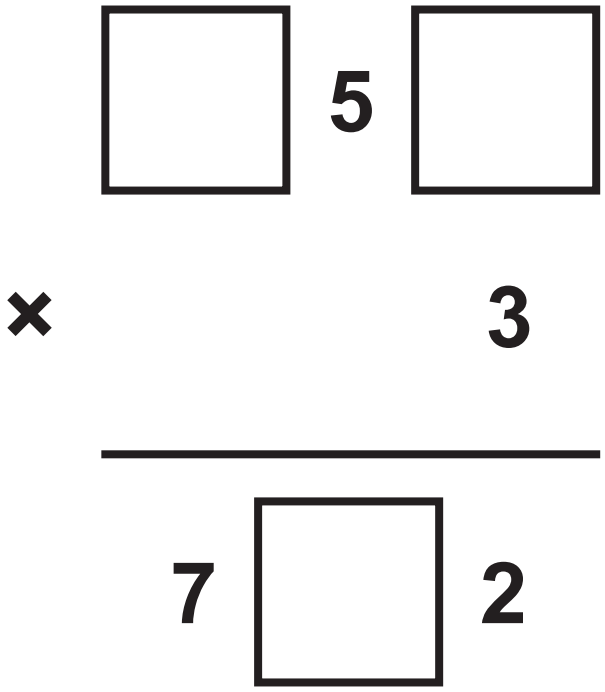

Number of points
12
10
8
6
4
2
0
Game 1
Game 2
Game 3
Game 4

4. **The numbers in the sequence below increase by the same amount each time.**

Write the missing numbers.

−11		1	7		19

5. Write the three missing digits to make this multiplication correct.



6. **Olivia is thinking of a number.**

Her number

is greater than 236

is less than 245

has a 3 in the tens' place

is an even number

What number is Olivia thinking of?

_____

7. A box holds **40** packets of envelopes.

Each packet holds **25** envelopes.

How many **envelopes** does the box hold?

8. **Write a whole number in each box to make the statements correct.**

One has been done for you.

18	rounded to the nearest ten is 20

	rounded to the nearest thousand is 4 000

	rounded to the nearest ten thousand is 820 000

9. **Look at the four calculations below.**

$4 \div 10$

$40 \div 10$

$4 \div 100$

$40 \div 100$

Two of these calculations have the same answer.

Write this answer as a decimal.

10. **Tick or mark the two prime numbers below that have a difference of 2**

15 **17** **19** **21** **23** **25**

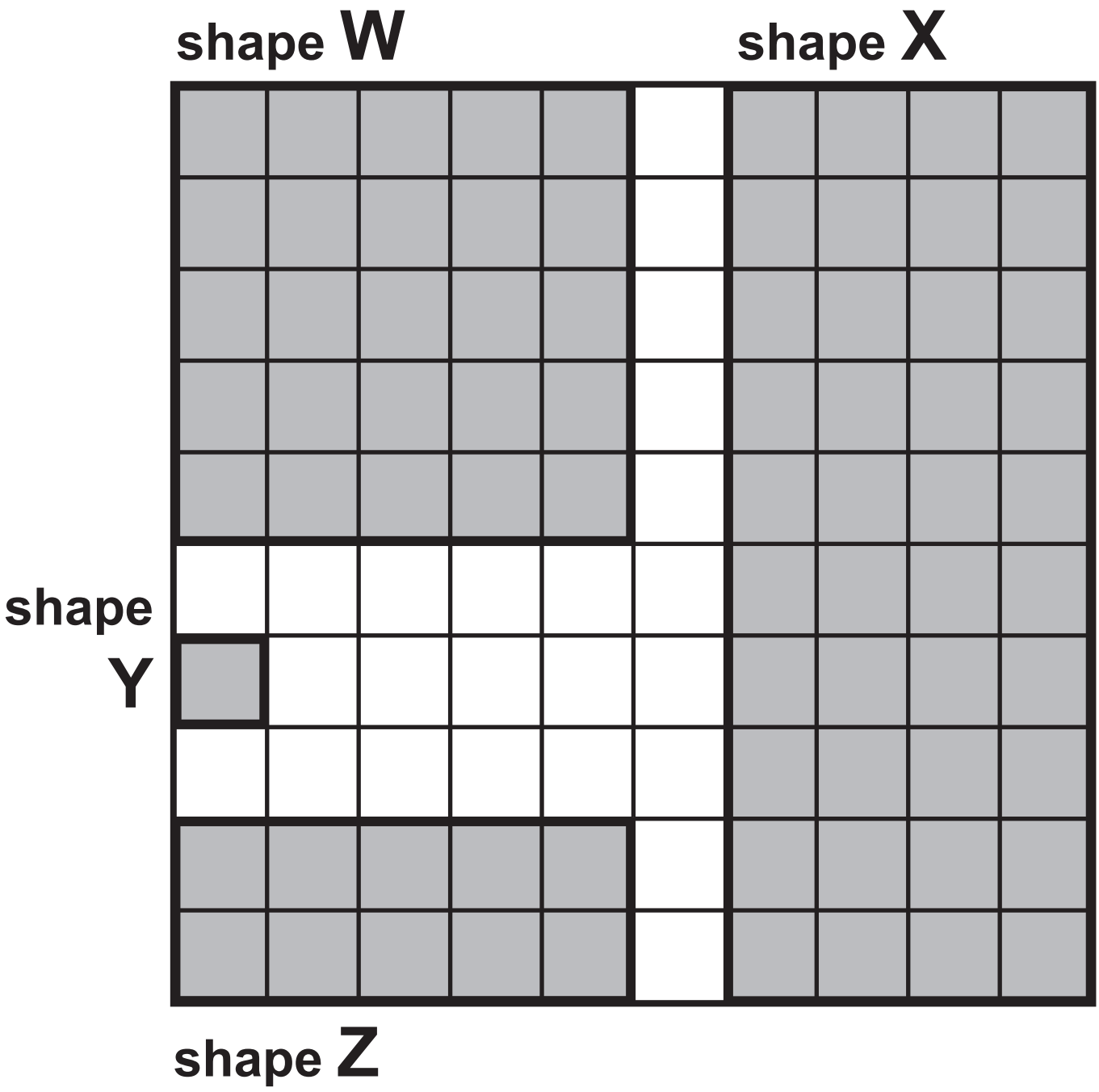
11. **The table below shows the number of children and adults at a childcare centre.**

Complete the table to make it correct.

The first row has been done for you.

Age in years	Number of children	Number of adults	Number of children per adult
1 and under	12	4	3
2 or 3	20		4
4 or 5		3	8

12. Look at the 10 by 10 square below. Shapes W, X, Y and Z cover different fractions of the square.



Match each shape to the correct fraction.

Shape **W**	$\frac{1}{4}$
Shape **X**	$\frac{1}{100}$
Shape **Y**	$\frac{2}{5}$
Shape **Z**	$\frac{1}{10}$

13. **You have a model for this question.**

The model is a hexagonal prism.

How many vertices does it have?

_____

How many edges does it have?

_____

14. **A class votes for a captain.**

Three–quarters of the class vote for Sam.

The remaining 7 pupils vote for Alex.

How many pupils are in the class?

_____

15. Write the missing number to make the **multiplication** below correct.

$$3 \cdot 207 \times 100 = \square \times 10$$

16. Look at the number below.

9 658 214

Tick or mark the statements that are **true**.

The digit **5** represents **50 000**

The value of the digit **9** is nine hundred thousands.

The digit **6** represents **6** millions.

The value of the digit **2** is twenty tens.

17. Chen buys these four items.

670 grams of apples for **£1·50**

400 grams of bread for **£0·70**

500 grams of butter

750 grams of cereal for **£1·45**

Chen pays for the four items with a **£10** note.

The price of the butter is not shown.

She receives **£3·85** change.

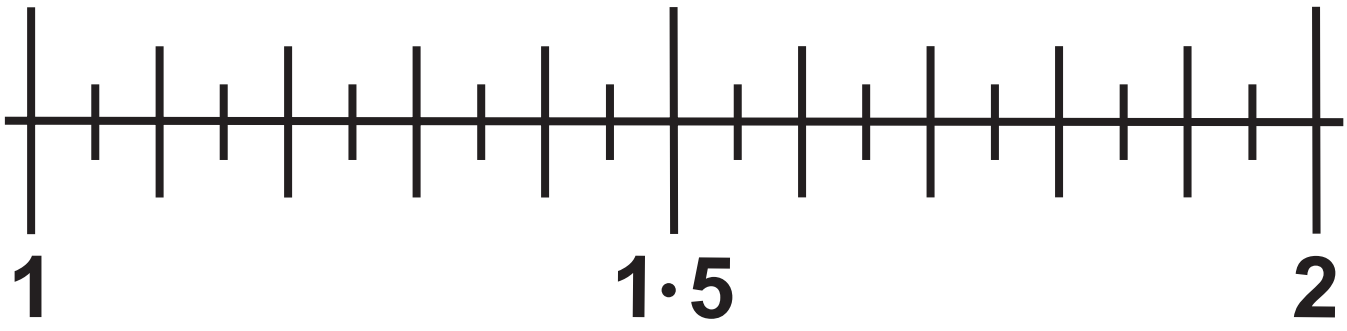
What is the price of the butter?

Show your method.

£_____

18. **Mark on the scale below to show**

1350 grams.



kilograms

19. A hall has 1 250 seats.

At 7 pm, 880 seats are filled.

At 8 pm, there are 40 empty seats.

How many seats were filled between 7 pm and 8 pm?

Show your method.

_____ seats

20. Each day, a school has

break from

10:15 am to 10:30 am

lunchtime from

12:40 pm to 1:30 pm

What is the total time the school has for breaks and lunchtime in a 5–day week?

Show your method.

_____ hours _____ minutes

21. **Look at the diagram on the opposite page.**

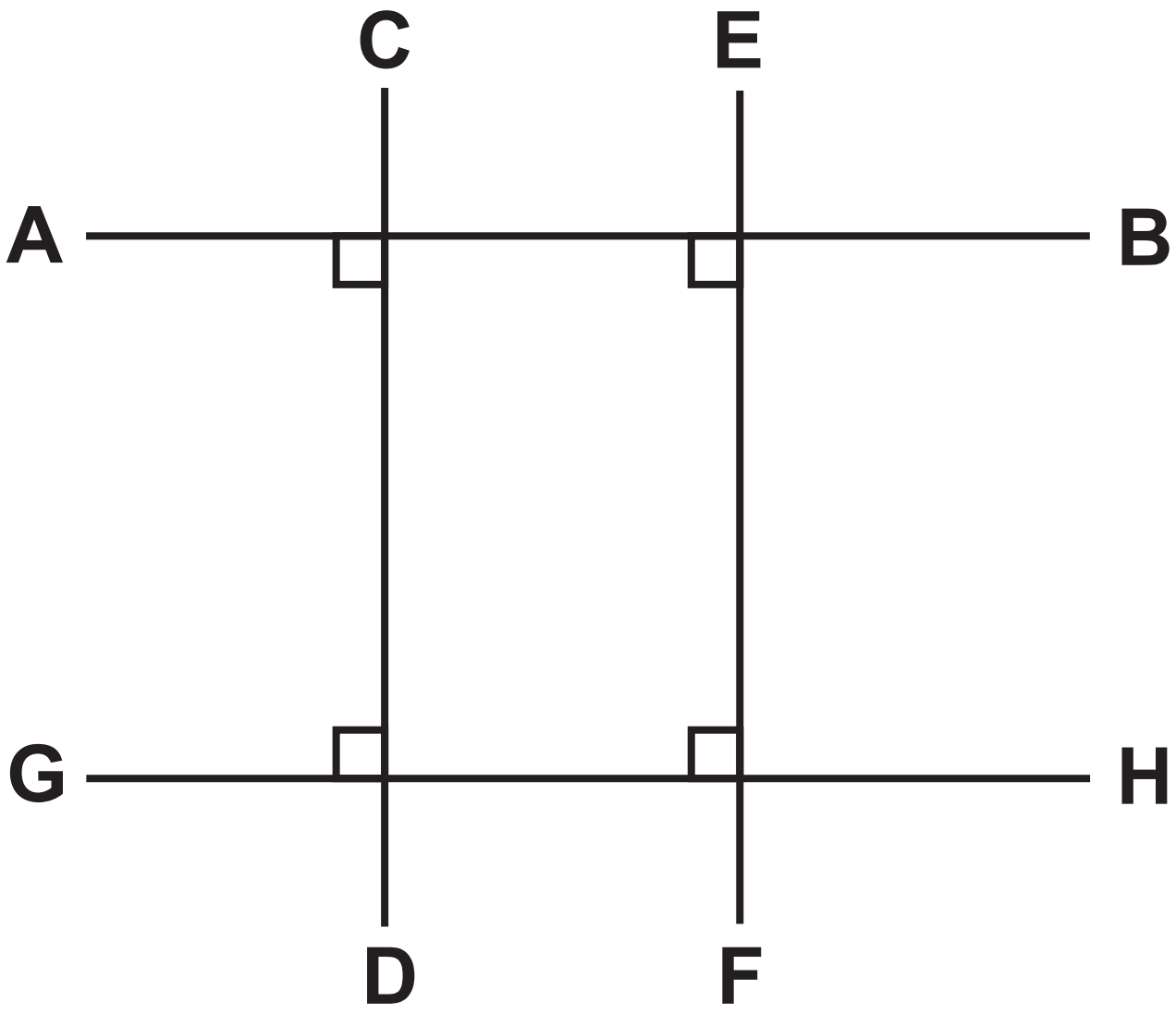
Tick or mark all the correct statements.

AB is parallel to CD

GH is parallel to AB

CD is perpendicular to GH

EF is perpendicular to CD


C
E
A
B
G
H
D
F

22. The table below shows the distance that five friends travel to school each day.

Name	Distance (km)
Amina	1·8
William	2·4
Layla	3·2
Chen	1·6
Dev	4·5

What is the mean distance they travel to school each day?

Show your method.

_____ **km**

23. Mrs Mills has **940** seeds to plant into trays.

She plants **12** seeds in each tray.

The last tray is not full.

What **fraction** of the last tray is filled?

Show your method.

24. **Look at the four numbers below.**

40 60 64 100

Use each number once to complete these statements.

is a square number.

is a cube number.

is a common multiple of 4 and 5

is a common factor of 80 and 120

25. **Write the missing numbers in the table below so that**

$$3 \times b - a = 2$$

a	b
	2
13	

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The test continues on the next page.

26. **Look at the 3 translations below.**

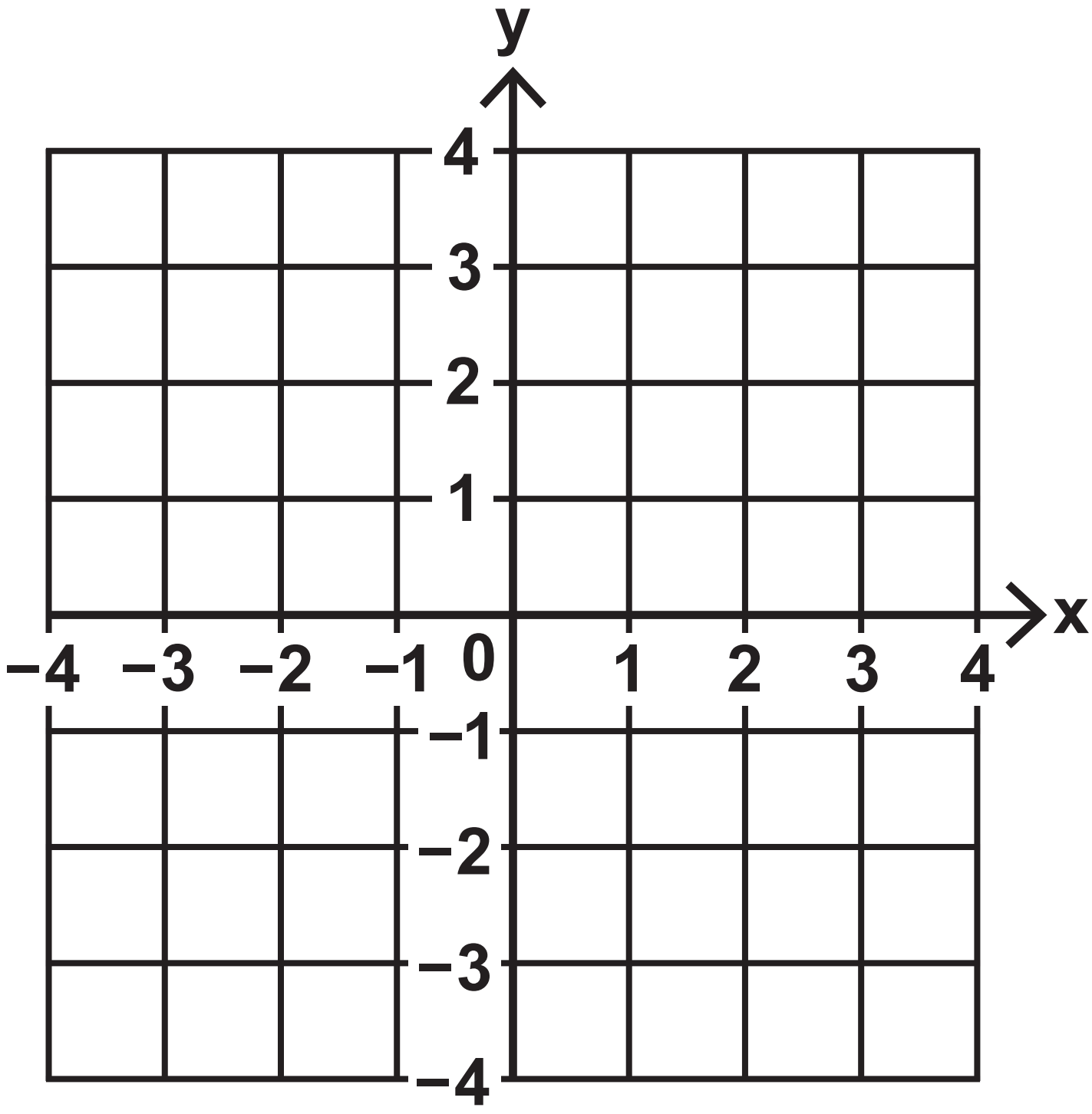
Tick or mark the translations below that are four units to the left.

from (0, 2) to (4, 2)

from (4, 3) to (0, 3)

from (1, 2) to (−3, 2)

You can use the coordinate grid on the opposite page to help you.


y
x
4
3
2
1
0
−1
−2
−3
−4
−4
−3
−2
−1
1
2
3
4

27. **Olivia has two jars of beads.**

The number of beads in Jar A is double the number of beads in Jar B.

Olivia says that 25% of the number of beads in Jar A is the same as 50% of the number of beads in Jar B.

Explain why Olivia is correct.

End of test

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M 0 0 1 3 0 A 0 1 4 4

Standards & Testing Agency

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