Independent Recap

Geometry Week 12

Year 4

Arithmetic

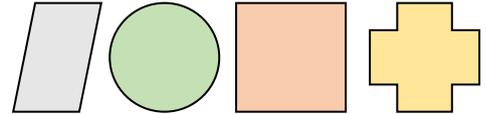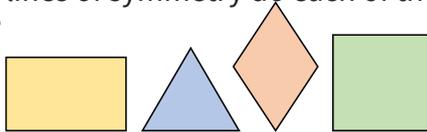|			
1. 9 x 8	**2.** 124 + 2,000	**3.** 484 - 100	**4.** $\frac{4}{9} + \frac{8}{9}$

Practice: Lines of Symmetry

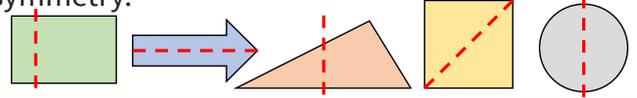**5.** Recap: Explain what a line of symmetry is.

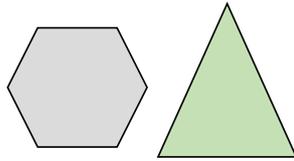**6.** Tick the shapes that have at least one line of symmetry.

7. How many lines of symmetry do each of these shapes have?

8. Tick the shapes that show a correct line of symmetry.

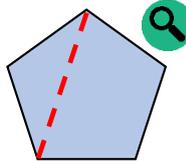**9.** Draw the lines of symmetry in these shapes.

10. How many lines of symmetry are there? Explain how you know.

11. Draw a shape with only one line of symmetry.

12. Write at least 4 letters of the alphabet that have at least one line of symmetry.

13. Meghan says she has shown a line of symmetry on the pentagon. Is she correct? Explain.

Challenge

14. True or false.

The number of sides of a shape is the same as the number of lines of symmetry.

Prove your answer is right or wrong.

💬 **You might want to talk to an adult**

🔍 **Spot the mistake**

Answers

| Q no.	Question	Answer
1	9 x 8	72
2	124 + 2,000x	2,124
3	484 - 100	384
4	$\frac{4}{9} + \frac{8}{9}$	$\frac{12}{9}$ or 1 and $\frac{3}{9}$
5	Explain what a line of symmetry is.	A line of symmetry is a line that acts like a mirror and splits a figure into two mirror-image parts.
6	Tick the shapes that have at least one line of symmetry.	Ticked - circle, square, cross
7	How many lines of symmetry do each of these shapes have?	2, 3, 2, 4
8	Tick the shapes that show a correct line of symmetry.	arrow, square, circle ticked
9	Draw the lines of symmetry in these shapes.	6 lines, 1 line
10	How many lines of symmetry are there? Explain how you know.	There are two lines of symmetry in a rectangle. Pupils may show this by drawing lines on the shape. The explanations of how the pupils know will vary. Accept answers that demonstrate an understanding of symmetry.
11	Draw a shape with only one line of symmetry.	Mirror-image shape
12	Write at least 4 letters of the alphabet that have at least one line of symmetry.	A, B, C, D, E, H, I, M, O, T, U, V, W, X, Y
13	Meghan says she has shown a line of symmetry on the pentagon. Is she correct? Explain.	Meghan is incorrect. A pentagon has 5 lines of symmetry, all of which pass through the centre of the shape. The line of symmetry Meghan has shown does not pass through the centre of the shape and is therefore not a line of symmetry.
14	True or false. The number of sides of a shape is the same as the number of lines of symmetry. Prove your answer is right or wrong.	False. Pupils may prove this is false by drawing shapes with their lines of symmetry, for example an isosceles triangle with only one line of symmetry.

Images

a.

b.

c.

d.

e.

f.

g.

h.

i.

k.

j.
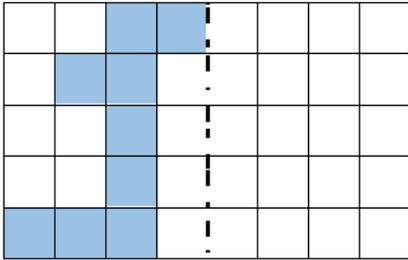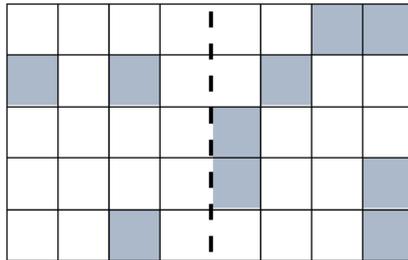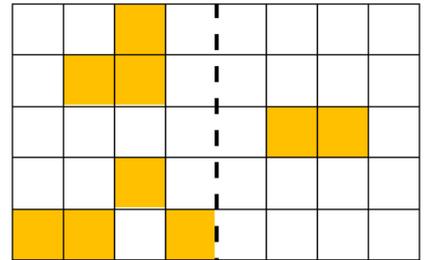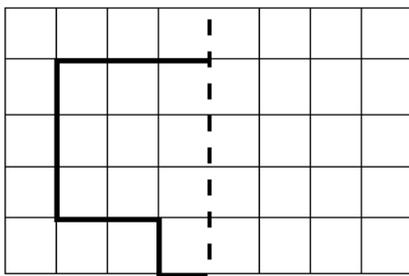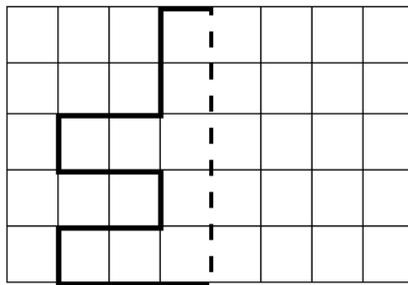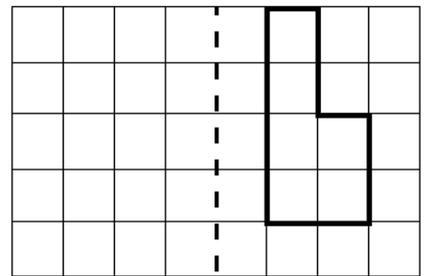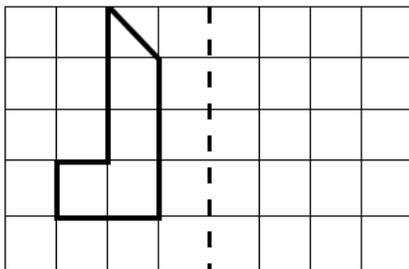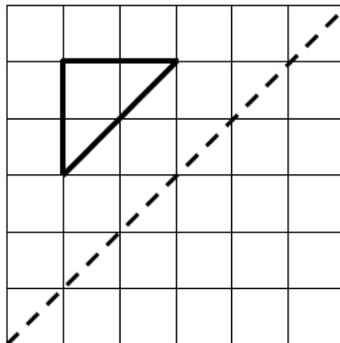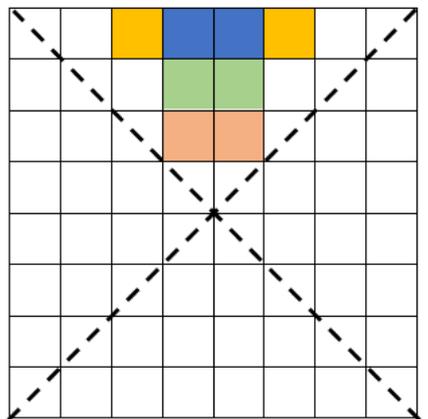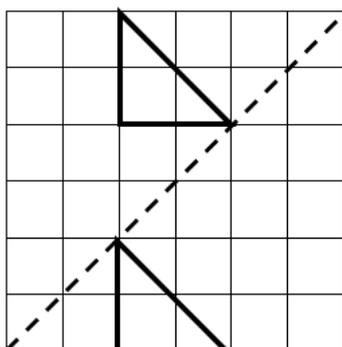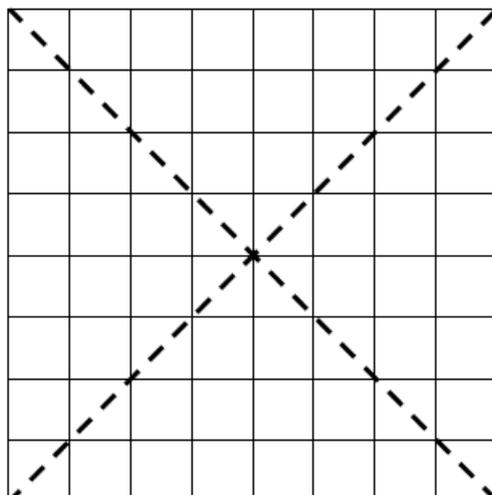
Arithmetic

1. $\frac{1}{4}$ of 24

2. $\frac{5}{7} - \frac{3}{7}$

3. $\frac{4}{6}$ of 60

4. $63 \div 9$

Practice: Complete a Symmetric Figure

5. Recap: Explain how to complete a symmetrical shape on squared paper.

6. Colour the squares in image a to make the pattern symmetrical.

7. Colour the squares in image b and c to make the patterns symmetrical.

8. Complete images d and e according to the line of symmetry.

9. Reflect images f and g in the mirror line.

10. Explain **how** you would reflect image h.

11. Reflect image h to create a symmetrical pattern.

12. Reflect image i to make a symmetrical pattern.

13. Jason says have reflected the shape in image j on the mirror line. Is Jason correct? Explain.

Challenge

14. Create a symmetrical pattern of your own using image k.

You might want to talk to an adult

Spot the mistake

Answers

| Q no.	Question	Answer
1	$\frac{1}{4}$ of 24	6
2	$\frac{5}{7} - \frac{3}{7}$	$\frac{2}{7}$
3	$\frac{4}{6}$ of 60	40
4	$63 \div 9$	7
5	Explain how to complete a symmetrical shape on squared paper.	It is important to use the mirror line when completing a symmetrical pattern. When completing a symmetrical shape, pupils will use different methods. Accept answers that accurately explain how to complete a symmetrical pattern.
6	Complete image a.	The completed image should be symmetrical to the given image.
7	Complete images b and c.	The completed image should be symmetrical to the given image.
8	Complete images d and e.	The completed image should be symmetrical shapes.
9	Complete images f and g.	The completed images should show accurately reflected shapes.
10	Explain how you would reflect image h.	Image g is different to the other images as the line of symmetry is diagonal. Pupils should be able to apply their understanding of reflecting shapes on the mirror line to reflecting a shape on a diagonal mirror line.
11	Complete image g.	The triangle should be accurately reflected in the mirror line.
12	Complete image i.	The final image should have four lines of symmetry.
13	Jason says have reflected the shape in image j on the mirror line. Is Jason correct? Explain.	Jason is incorrect. He has translated the shape, not reflected it.
14	Create a symmetrical pattern of your own using image k.	Accept any image that has four lines of symmetry.

Grid
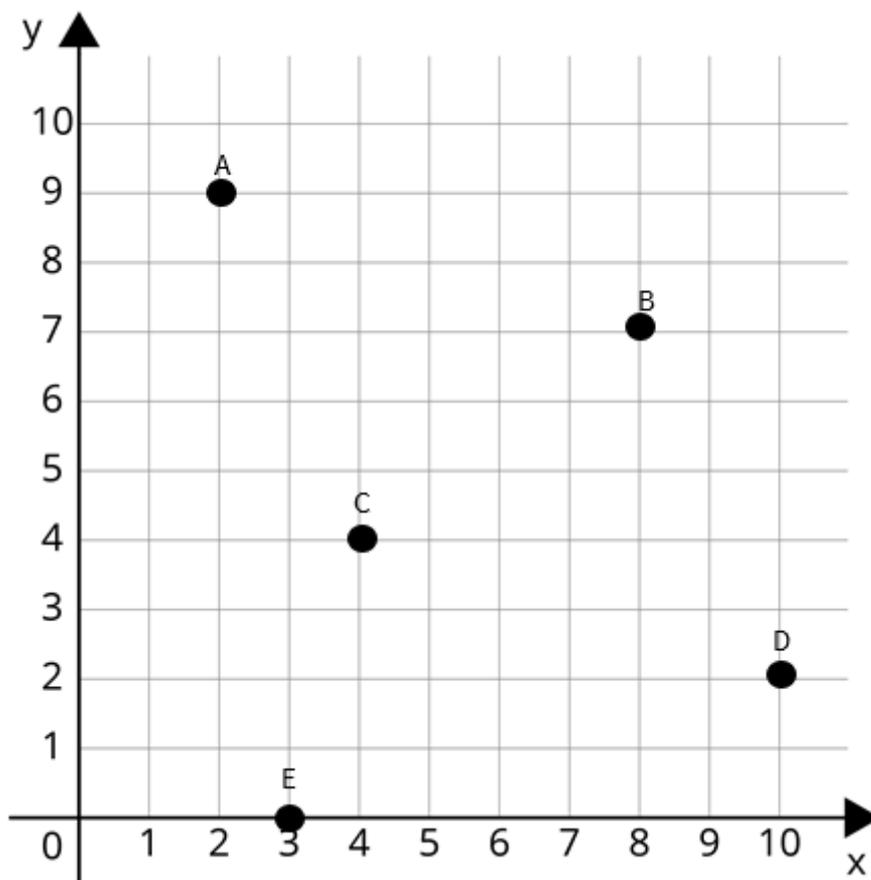
Arithmetic

1. 44 x 0	**2.** 34 x 9	**3.** 60 ÷ 4	**4.** 7 x 7

Practice: Describe Position

5. Recap: Explain how to write coordinates.

6. Write the coordinates of these points.

A , C, D

7. Which letters are at these coordinates?

a. (8,7)   b. (3,0)

8. Which of these points does NOT have a letter?

(4,4)   (2,9)   (2,10)   (8,7)

9. Draw points at these coordinates.

(3,5)   (7,9)

10. Which axis is the x-axis and which axis is the y-axis?

11. Points B and C are two vertices on a rectangle. What are the coordinates for the other two vertices?

12. Plot these coordinates: (8,2) (10,2) (8,5) (10,5)

What shape does it make?

13. Tyrone says the coordinates for point E are (3,1). Is this correct? Explain.

Challenge

14. Point C is one vertex on a rectangle. What could the other points be?

Explain how you know.
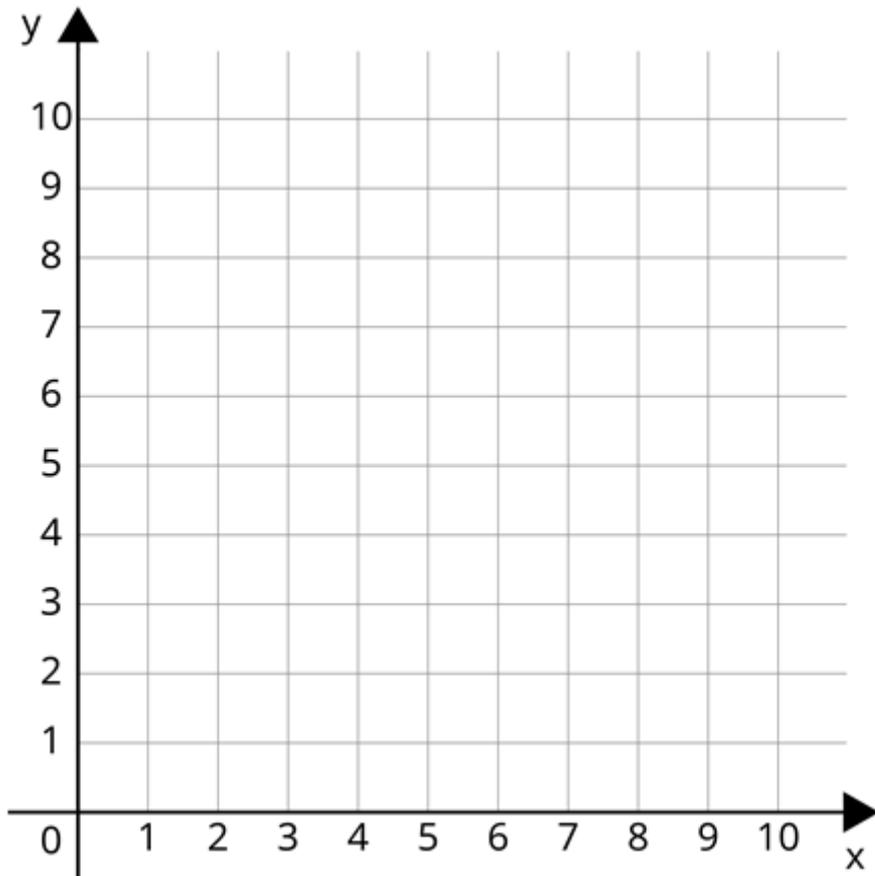
💬 **You might want to talk to an adult**
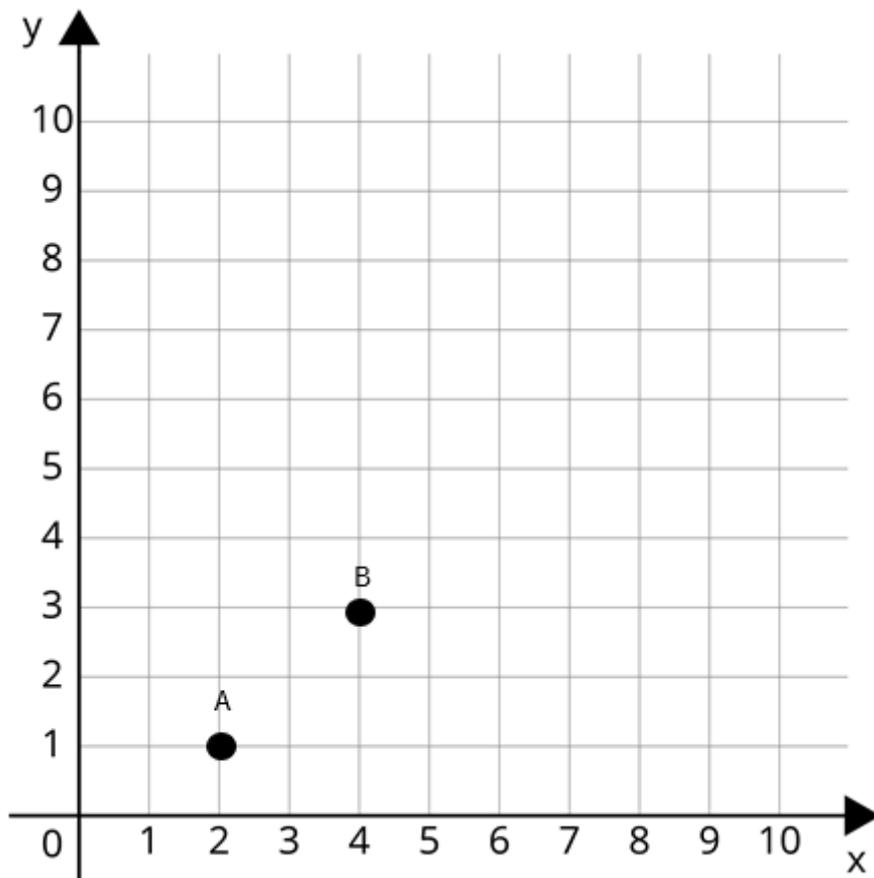
🔍 **Spot the mistake**

Answers

Q no.	Question	Answer
1	44 x 0	0
2	34 x 9	306
3	60 ÷ 4	15
4	7 x 7	49
5	Explain how to write coordinates.	Coordinates are written using the x-axis coordinate first then the y-axis coordinate.
6	Write the coordinates of these points.	Point A (2,9), Point C (4,4), Point D (10,2)
7	Which letters are at these coordinates?	a. B, b. E
8	Which of these points does NOT have a letter?	(2,10)
9	Draw points at these coordinates.	Points should be accurately drawn on the grid.
10	Which axis is the x-axis and which axis is the y-axis?	The x-axis is the axis that runs horizontally, the y-axis is the vertical axis.
11	What are the coordinates for the other two vertices?	(4,7) and (8,4)
12	What shape does it make?	Rectangle
13	Tyrone says the coordinates for point E are (3,1). Is this correct? Explain.	Tyrone has correctly found the coordinate for the x-axis (3) but has not understood how to read the y-axis, especially when the y-axis is 0. His answer is incorrect.
14	Point C is one vertex on a rectangle. What could the other points be? Explain how you know.	Answers will vary. Accept any 3 coordinates that would make a rectangle with C as a vertex. Example answer: (0,4) (0,2) (4,2)

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Grids

a.

b.

Arithmetic

1. 5,804 + 1,040	**2.** $\frac{3}{6}$ of 36	**3.** 54 ÷ 6	**4.** 182 + 40

Practice: Draw on a Grid

5. Recap: Are points plotted between grid lines or on grid lines? Explain.

6. Plot these points on grid a:

a. (10,3)　　　　b. (0,3)　　　　c. (5,7)

7. Plot these points on grid a:

d. (3,7)　　　　e. (2,1)　　　　f. (6,8)

8. Plot these points on grid a, what shape is created?

g. (4,10)　　　　h. (6,7)　　　　i. (2,8)

9. Plot these points on grid a, what shape is created?

j. (4,1)　　k. (4,2)　　l. (5,1)　　m. (5,2)

10. True or false. On grids like the ones shown, coordinates always come in pairs.

11. Grid b shows two vertices of a right-angle triangle. What could the third vertex be? Draw it on the grid and write the coordinates.

12. Grid b shows two points in a line. Draw two more points that would be in this line and write their coordinates.

13. For question 12, Samiha has written the coordinates (7,7). Is this correct? Explain.

Challenge

14. One vertex of a pentagon is drawn at (5,6). What could the other points be? Draw the pentagon on grid b.

You might want to talk to an adult

Spot the mistake

Answers

Q no.	Question	Answer
1	5,804 + 1,040	6,844
2	$\frac{3}{6}$ of 36	18
3	54 ÷ 6	9
4	182 + 40	222
5	Are points plotted between grid lines or on grid lines? Explain.	Points are plotted on grid lines.
6	Plot these points on grid a:	Points should be accurately drawn on the grid.
7	Plot these points on grid a:	Points should be accurately drawn on the grid.
8	Plot these points on grid a, what shape is created?	Points should be accurately drawn on the grid. Pupils should identify that a scalene triangle is drawn.
9	Plot these points on grid a, what shape is created?	Points should be accurately drawn on the grid. Pupils should identify that a square is drawn.
10	True or false. On grids like the ones shown, coordinates always come in pairs.	True. On a 2D grid, coordinates will always come in pairs. The time that coordinate grids do not come in pairs is when there is a 3D grid. Coordinates on a 3D grid come in threes (x, y, z).
11	Grid b shows two vertices of a right-angle triangle. What could the third vertex be?	(2,3) or (4,1)
12	Grid b shows two points in a line. Draw two more points that would be in this line and write their coordinates.	Accept any answers that continue the line. Example answers: (1,0) (3,2) (5,4).
13	For question 12, Samiha has written the coordinates (7,7). Is this correct? Explain.	Samiha is incorrect, she has not found a point that is in the line. She should have identified this as the two points already on the grid do not have the same number for the x and y coordinates.
14	One vertex of a pentagon is drawn at (5,6). What could the other points be? Draw the pentagon on grid b.	The answers will vary depending on the pentagon pupils draw. They should have drawn five vertices (including the vertex they have been given) and connected them. As long as their shape has five vertices and five sides, they will have accurately drawn a pentagon.