

LINES OF SYMMETRY: 2D SHAPES

AtoZrevision



GRADE 1

Examination Practice Questions

You should have:

A ruler, protractor, compasses, a pen, pencil, eraser, calculator.
For some questions, you may need tracing paper.

Instructions

- Use **black** ink or ball-point pen.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators may be used.**

Information

- The marks for each question are shown in brackets.
- If the number of marks for two similar questions isn't the same, this is likely due to them being modelled on different specifications. In this case, it is worth considering both mark schemes.
- Use the number of marks for each question as a guide as to how much time to spend on each question. As a rough guide, you can multiply the number of marks by 1.2 to see how many minutes you should spend on a question.
- Questions will generally get more challenging as the document progresses. Some of the latter questions may go beyond the core grade level for this topic.

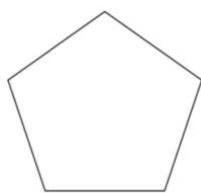
Advice

- Read each question carefully before you start to answer it.
- Don't forget to have fun.
- Check your answers at the end.

Q1.

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Here is a regular pentagon.



How many line of symmetry does it have?

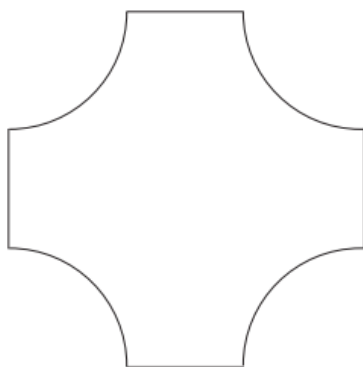
.....

(1 mark)

Q2.

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How many lines of symmetry does this shape have?



.....

(1 mark)

Q3.

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Here is a shape.



How many lines of symmetry does the shape have?

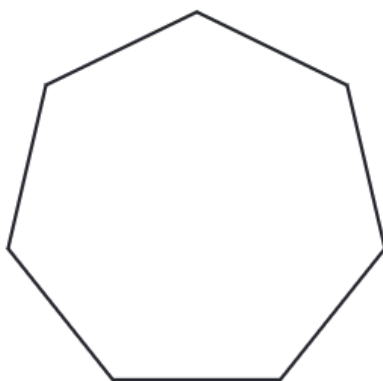
.....

(1 mark)

Q4.

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How many lines of symmetry does the following shape have?



.....

(1 mark)

Q5.

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How many lines of symmetry does the following shape have?



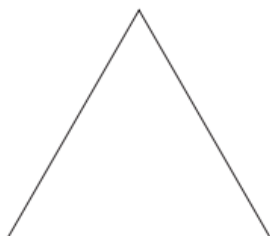
.....

(1 mark)

Q6.

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Here is an equilateral triangle.



Write down how many lines of symmetry the triangle has.

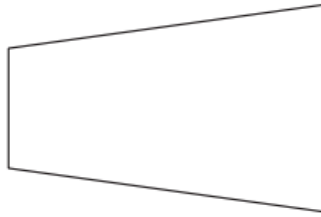
.....

(1 mark)

Q7.

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Write down how many lines of symmetry this shape has.



.....

(1 mark)

Q8.

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Here is a shape.



How many lines of symmetry does this shape have?

.....

(1 mark)

Q9.

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Here is a rhombus.



How many lines of symmetry does the rhombus have?

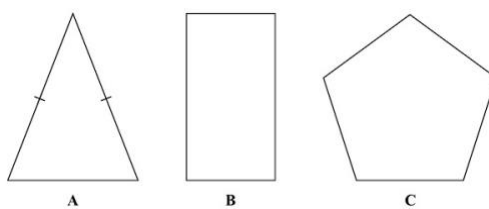
.....

(1 mark)

Q10.

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Here are three shapes.



Shape **B** is a rectangle.

How many lines of symmetry does it have?

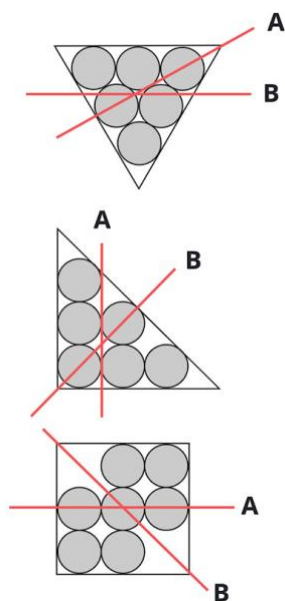
.....

(1 mark)

Q11.

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Select the correct line of symmetry for each of the shapes below.



.....

.....

.....

(3 marks)

Q12.

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Not drawn
accurately

How many lines of symmetry does the triangle have?

.....

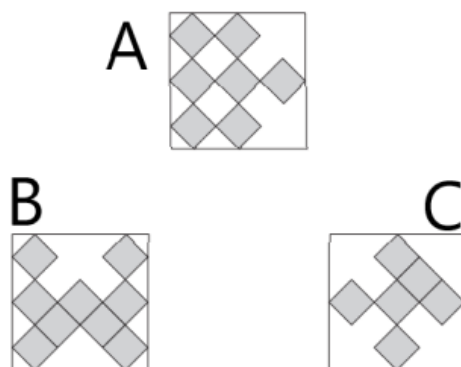
(1 mark)

Q13.

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These three square tiles have symmetrical patterns on them.

For each one would the line of symmetry be **diagonal**, **horizontal** or **vertical**?



A

B

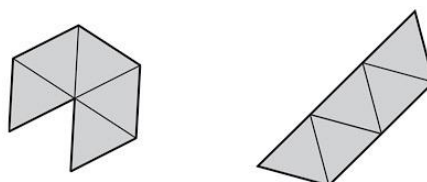
C

(3 marks)

Q14.

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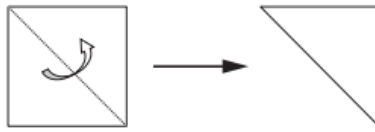
These two shapes are made from equilateral triangles.



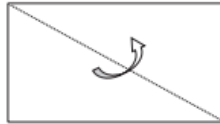
Draw one line of symmetry on each shape. Use a ruler.

(1 mark)

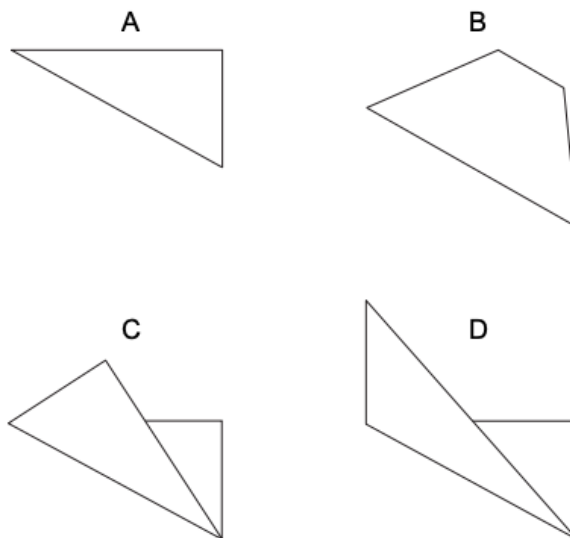
When you fold a **square** along a diagonal, you see a triangle.



What do you see when you fold a **rectangle** along a diagonal?



Select the correct answer.

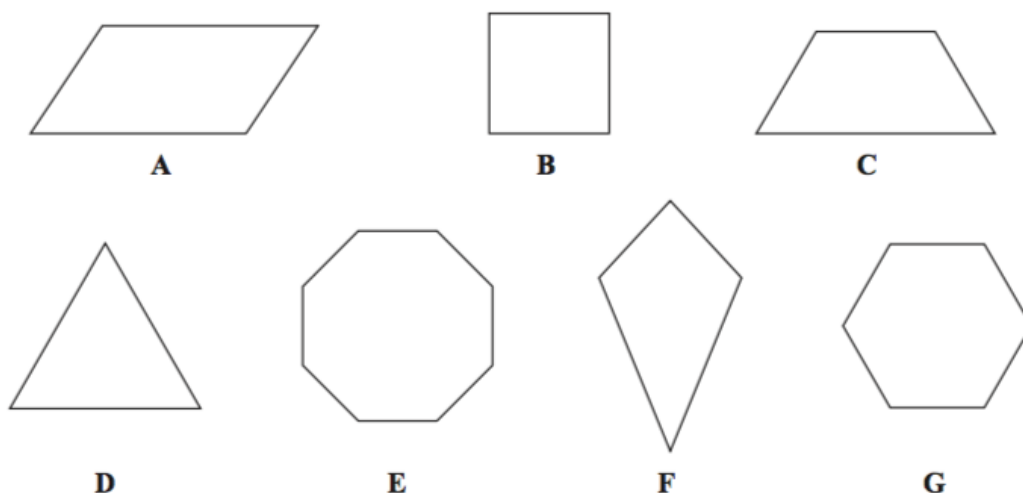


.....
(1 mark)

Q16.

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Here are seven shapes.



One of these shapes has no lines of symmetry.

Write down the letter of this shape.

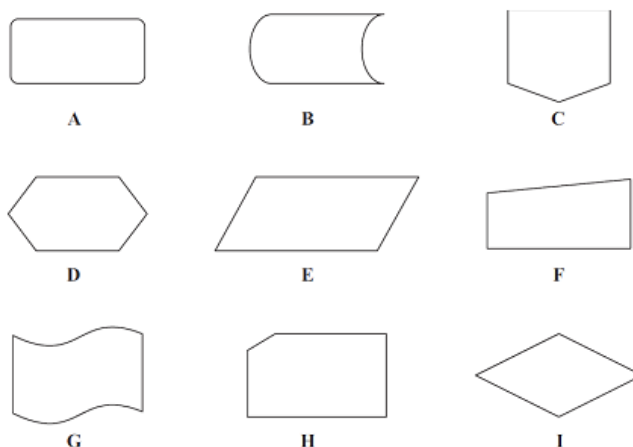
.....

(1 mark)

Q17.

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Here are nine shapes.



Write down the letter of a shape that has exactly one line of symmetry.

.....

(1 mark)

Q18.

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From the list below circle all of the quadrilaterals that have exactly one line of symmetry

Square

Rectangle

Parallelogram

Rhombus

Kite

Isosceles Trapezium

Non-Isosceles Trapezium

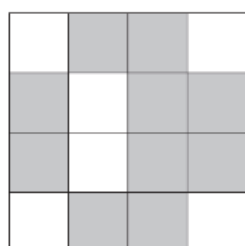
Scalene Quadrilateral

(2 marks)

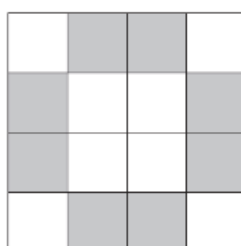
Q19.

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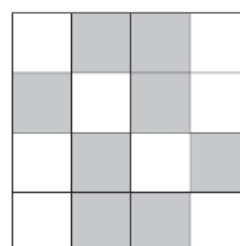
The diagrams show patterns made from grey tiles and white tiles.



A



B



C

One of the patterns has exactly 1 line of symmetry.

What is the letter of this pattern?

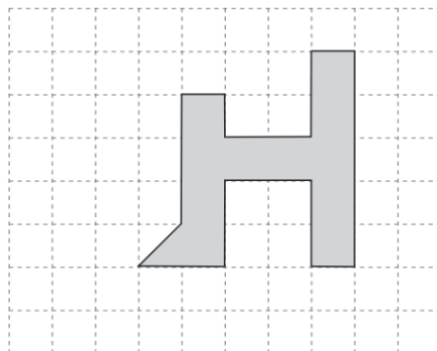
.....

(1 mark)

Q20.

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What is the minimum number of triangles and squares that must be drawn so that the shaded shape has one line of symmetry?



Triangles

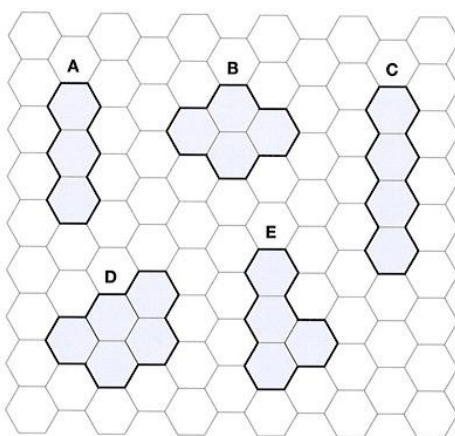
Squares

(2 marks)

Q21.

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Here are five shapes on a regular grid.



Which shape has only one **line of symmetry**?

.....

(1 mark)

Here are four road signs.



A



B



C



D

Two of these road signs have one line of symmetry.

Write the letters of each of these **two** road signs.

.....

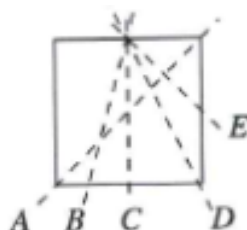
(2 marks)

QUESTIONS FROM MATHEMATICAL COMPETITIONS

Q1.

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Along which line should an upright mirror be placed so that the part of the square on one side of the mirror and its reflection form an octagon?



Q2.

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The diagram shows a poster which Beatrix has (this way up!) on her wall. When Beatrix was standing on her head, looking in a mirror on the opposite wall at the poster on the wall behind her, how many letters could still be read in the normal way?



Q3.

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A square is divided into eight congruent triangles, as shown. Two of these triangles are selected at random and shaded black. What is the probability that the resulting figure has at least one axis of symmetry?

