

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.
- 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 been carefully compiled from or modelled on a variety of past papers and will generally get more challenging as the document progresses. Some of the later questions will 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.

AtoZrevision.com

Here is a rectangle.



Write down the order of rotational symmetry of the rectangle.

.....2.....

(1 mark)

Q2.

AtoZrevision.com

Here is a parallelogram.



Write down the order of rotational symmetry of this parallelogram.

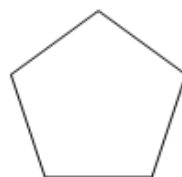
.....2.....

(1 mark)

Q3.

AtoZrevision.com

Here is a regular pentagon.



Write down the order of rotational symmetry of this regular pentagon.

.....5.....

(1 mark)

Q4.

AtoZrevision.com

Here is a regular hexagon.



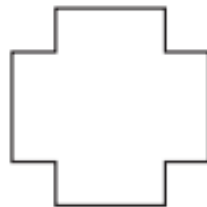
Write down the order of rotational symmetry of this regular hexagon.

6

(1 mark)

Q5.

AtoZrevision.com



Write down the order of rotation symmetry of the shape.

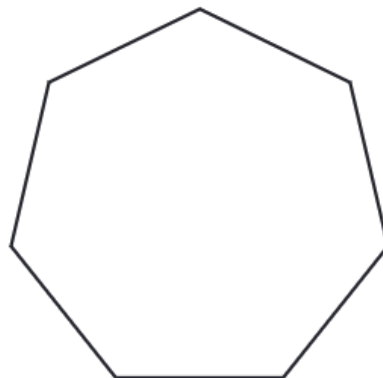
4

(1 mark)

Q6.

AtoZrevision.com

What is the order of rotational symmetry of the following shape?



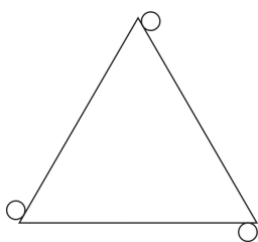
7

(1 mark)

Q7.

AtoZrevision.com

What is the order of rotational symmetry of the shape below?



.....3.....

(1 mark)

Q8.

AtoZrevision.com

Write down the order of rotation symmetry of this shape.



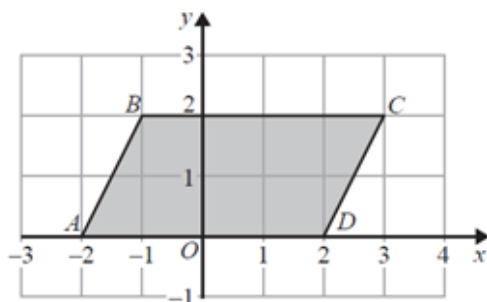
.....4.....

(1 mark)

Q9.

AtoZrevision.com

The diagram shows a quadrilateral $ABCD$ on a centimetre grid.



Write down the order of rotational symmetry of the quadrilateral $ABCD$

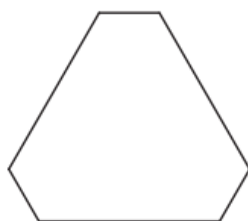
.....2.....

(1 mark)

Q10.

AtoZrevision.com

Write down the order of rotation symmetry of the polygon below.



3

(1 mark)

Q11.

AtoZrevision.com



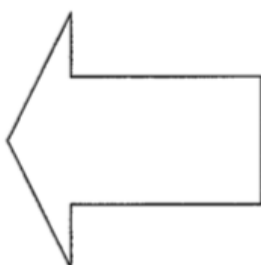
A



B



C



D



E

Which **two** of these shapes have rotational symmetry of order 2?



B AND C

(2 marks)

Q12.

AtoZrevision.com

Name a 4-sided shape with rotational symmetry of order 4.

SQUARE

(1 mark)

Q13.

AtoZrevision.com

Write down the order of rotational symmetry of a square.

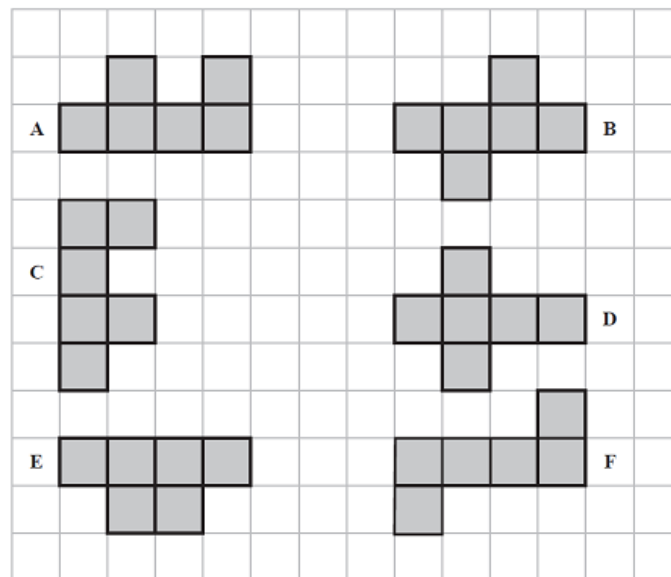
4

(1 mark)

Q14.

AtoZrevision.com

Here are six shapes made from centimetre squares.



Write down the letter of a shape with rotational symmetry of order 2.

B or F

(1 mark)

Q15.

AtoZrevision.com

Which shape has rotational symmetry of order 2? Circle the correct answer.

parallelogram
square

equilateral triangle

isosceles triangle

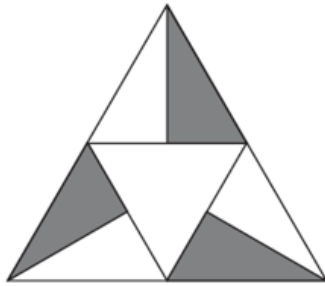
scalene triangle

(1 mark)

Q16.

AtoZrevision.com

Here is a shape.



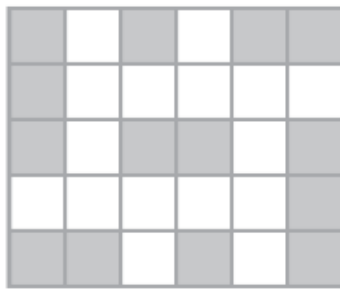
Write down the order of rotational symmetry of this shape.

.....3.....

(1 mark)

Q17.

AtoZrevision.com



Write down the order of rotational symmetry of the shape.

.....2.....

(1 mark)

Q18.

AtoZrevision.com

Mustafa says:

"A rectangle is the only quadrilateral that has rotation symmetry of order 2."

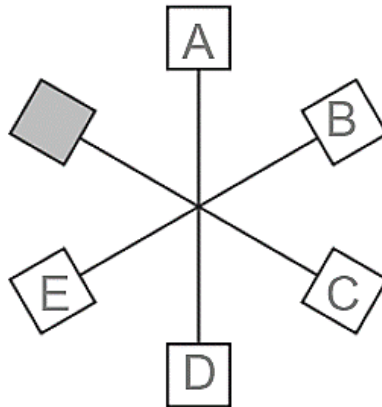
Is he correct?

E.g.
(RHOMBUS / PARALLELOGRAMS) NO
.....
(1 mark)

Q19.

AtoZrevision.com

Select the letters of the two squares which need to be shaded in the diagram below to make it have rotational symmetry of order 3.



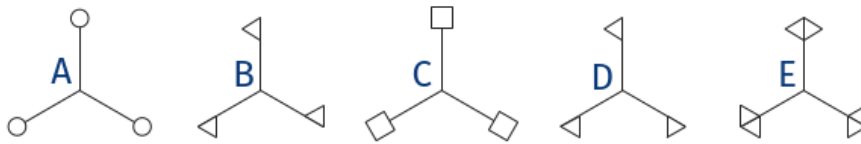
B AND D

(1 mark)

Q20.

AtoZrevision.com

Which of the following shapes has rotational symmetry of order 3, but has no line symmetry?



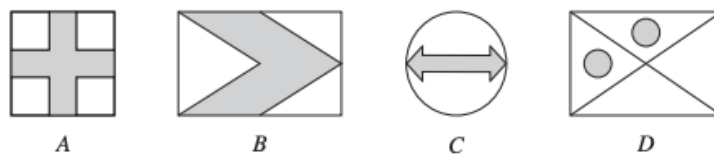
B

(1 mark)

Q21.

AtoZrevision.com

Here are four diagrams.



Which diagram has rotational symmetry of order 2?

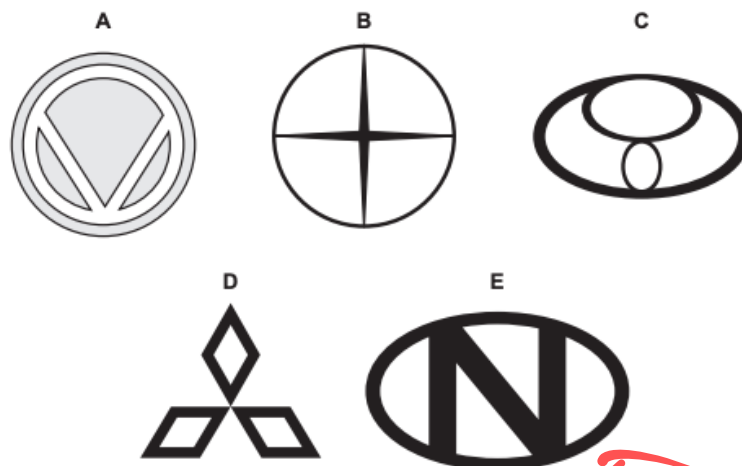
C

(1 mark)

Q22.

AtoZrevision.com

Here are five badges.



Which **three** of the badges have rotational symmetry?

B, D, E
(3 marks)

Q23.

AtoZrevision.com

Here are four road signs.

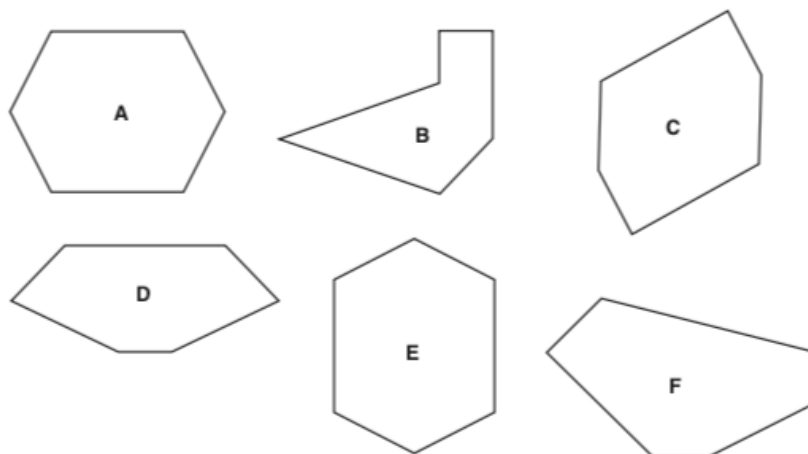


Only one of these four road signs has rotational symmetry.

Write down its order of rotational symmetry.

3
(1 mark)

Ewan has drawn these hexagons.



Which hexagon has rotational symmetry of order 2 and no line of symmetry?

C

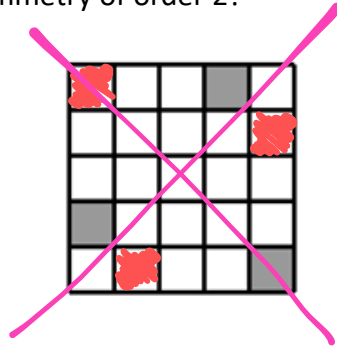
.....
(1 mark)

QUESTIONS FROM MATHEMATICAL COMPETITIONS

Q1.

AtoZrevision.com

What is the smallest number of *additional* squares which must be shaded so that this figure has at least one line of symmetry *and* rotational symmetry of order 2?



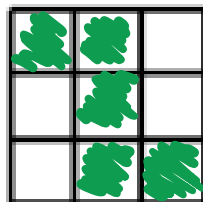
3 SQUARES

Q2.

AtoZrevision.com

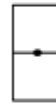
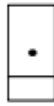
Each of the nine small squares in this grid can be coloured completely black or completely white.

What is the largest number of squares that can be coloured black so that the design created has rotational symmetry of order 2, but no lines of symmetry?



5 SQUARES

Each of these figures is based on a rectangle whose centre is shown.



How many of the figures have rotational symmetry of order two?

3!