

Write your name here

Surname

Other names

In the style of:

**Edexcel GCSE**

Centre Number

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Candidate Number

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# Mathematics A

## Transformations

**Foundation Tier**

Past Paper Style Questions  
Arranged by Topic

Paper Reference

**1MA0/1F**

**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

Total Marks



### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- **Calculators must not be used.**

### Information

- The total mark for this paper is 100
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (\*) are ones where the quality of your written communication will be assessed.

### Advice

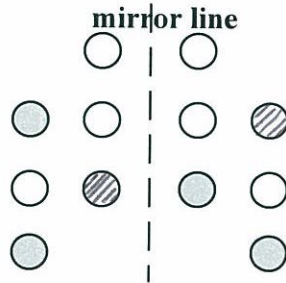
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►



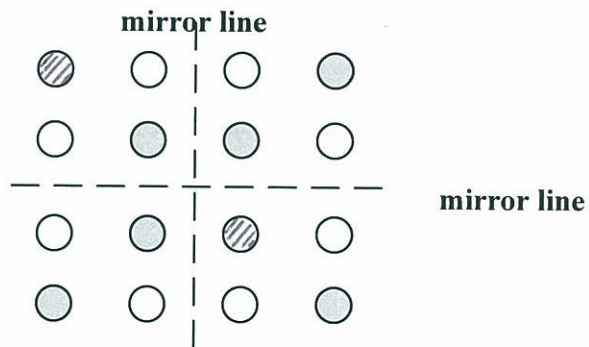
1. Here are some patterns of circles.

(a) Shade **two** more circles to give this pattern symmetry in the mirror line.



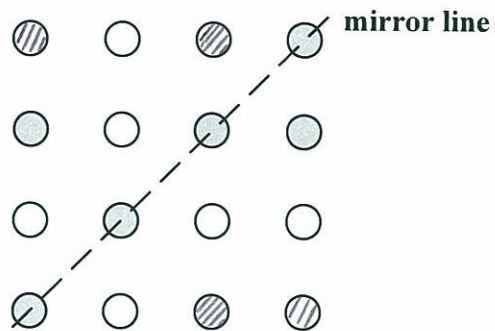
(2)

(b) Shade **two** more circles to give this pattern symmetry in both mirror lines.



(2)

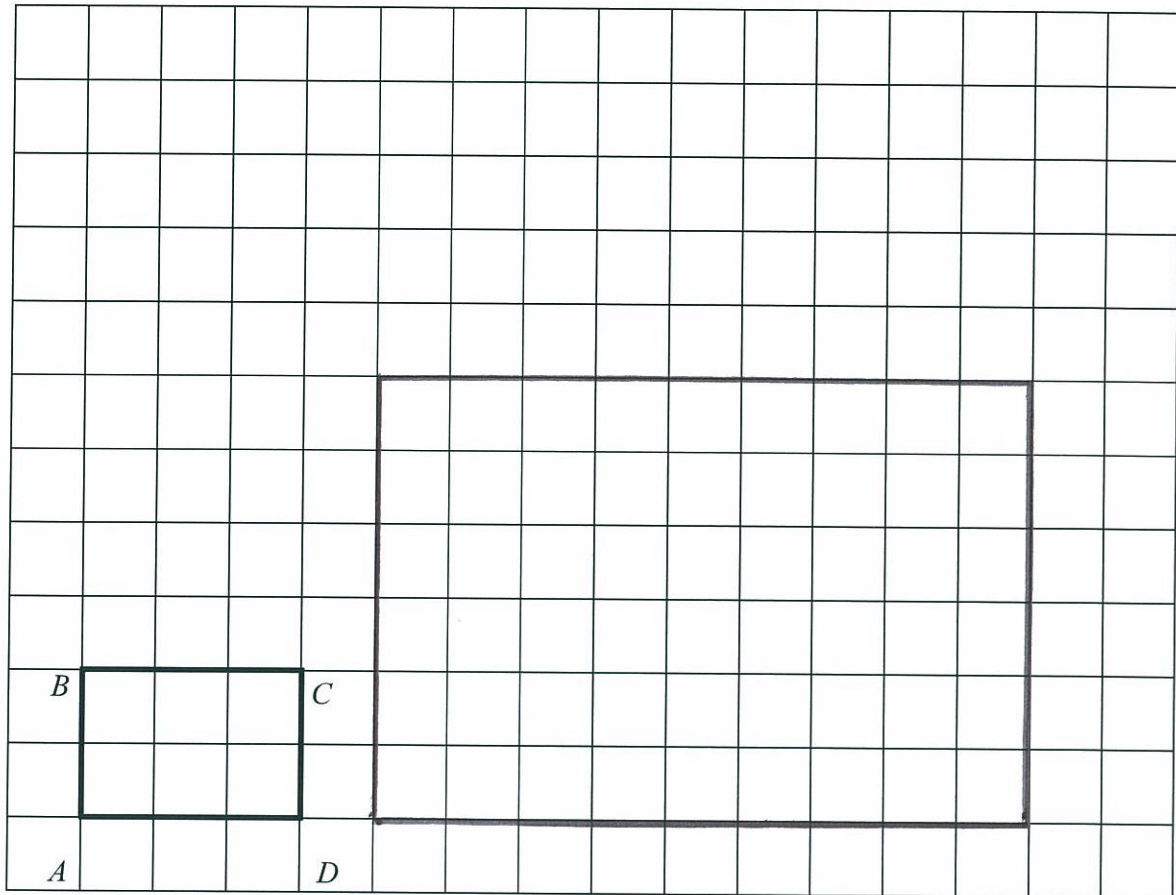
(c) Shade **four** more circles to give this pattern symmetry in the mirror line.



(2)



2. The shape  $ABCD$  is drawn on a grid.



(a) Enlarge  $ABCD$  by scale factor 3. (2)

(b) How many times bigger is the area of the enlarged shape than the area of  $ABCD$ ?

$$\frac{9 \times 6}{3 \times 2} = \frac{54}{6} = 9 \text{ times bigger} \quad \dots\dots\dots 9$$

(2)

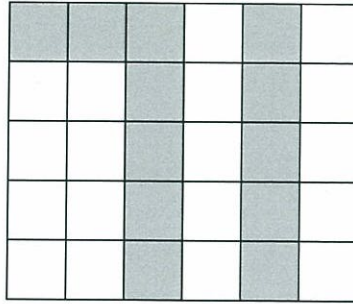
N.B: Area of larger = Area of smaller x (Scale factor)<sup>2</sup>

$$\begin{aligned} \text{i.e. } A_L &= A_S \times 3^2 \\ &= A_S \times 9 \end{aligned}$$



3.

The number 71 is shaded on the grid.



(a) What fraction of the grid is shaded?

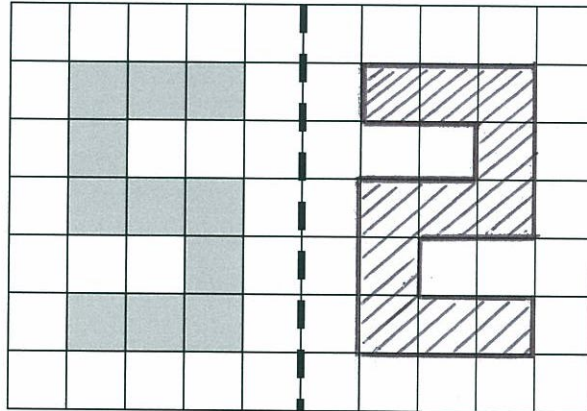
Give your answer in its simplest form.

$$\frac{12}{30} = \frac{2}{5}$$

$$\frac{2}{5}$$

(b) The letter S is shaded on this grid.

(3)



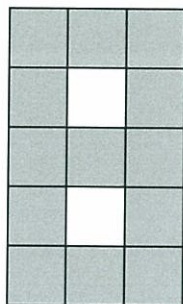
mirror line

Draw the reflection of the letter S in the mirror line.

(2)



3. (c) The number eight is drawn.



Write down the order of rotational symmetry.

2

(1)

