

Edexcel GCSE

Mathematics (Linear) – 1MA0

SHADING FRACTIONS OF RECTANGLES

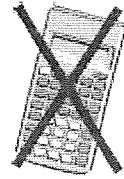
Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.

Tracing paper may be used.

Items included with question papers

Nil

**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 may be used.

Information

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 – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

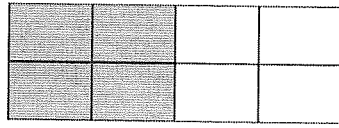
Read each question carefully before you start to answer it.

Keep an eye on the time.

Try to answer every question.

Check your answers if you have time at the end.

1.

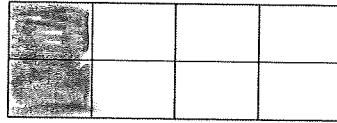


- (a) (i) What fraction of this shape is shaded? Write your fraction in its simplest form.

$$\frac{4}{8} = \frac{1}{2}$$

.....

- (ii) Shade $\frac{1}{4}$ of this shape.



(3)

9 is the number that is half way between 6 and 12

$$6 \quad \dots\dots 9 \dots\dots 12$$

- (b) Work out the number that is half way between

(i) 20 40 60

(ii) 100 000 150 000 200 000

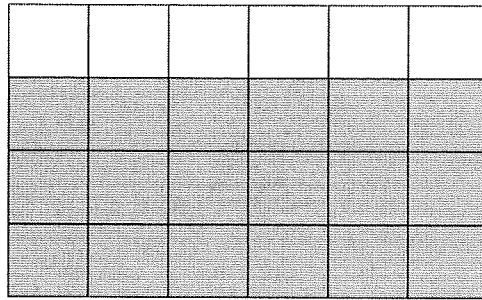
(iii) 6.5 6.55 6.6

(iv) $\frac{1}{4}$ $\frac{3}{8}$ $\frac{1}{2}$

(4)

(Total 7 marks)

2. (a) Write down the fraction of this shape that is shaded.



Write your fraction in its simplest form.

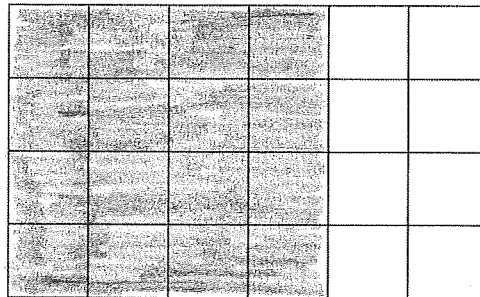
$$\frac{18}{24} = \frac{3}{4}$$

(Handwritten annotations: 18/24 has a 6 above 18 and a 6 below 24, with an arrow pointing to 3/4. 3/4 has a 3 above 3 and a 4 below 4.)

$\frac{3}{4}$
.....

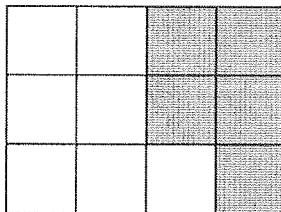
(2)

(b) Shade $\frac{2}{3}$ of this shape.



(1)

(c) What fraction of the shape is shaded?

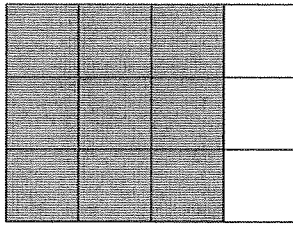


$\frac{5}{12}$
.....

(2)

(Total 5 marks)

3. (a) Write down the fraction of this shape that is shaded.
Give your fraction in its simplest form.

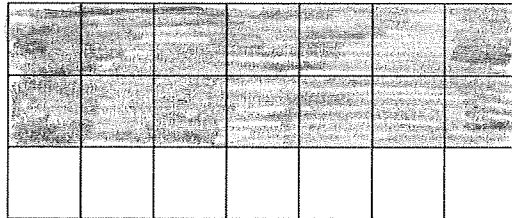


$$\frac{9}{12} = \frac{3}{4}$$

3/4

(2)

- (b) Shade $\frac{2}{7}$ of this shape.



(1)

- (c) Write $\frac{3}{10}$ as a decimal.

0.3

(1)

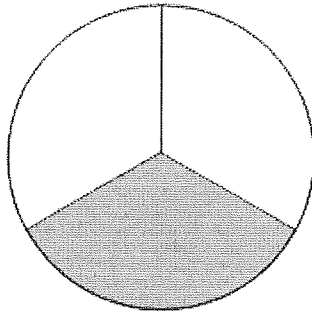
- (d) Write 0.39 as a fraction.

39/100

(1)

(Total 5 marks)

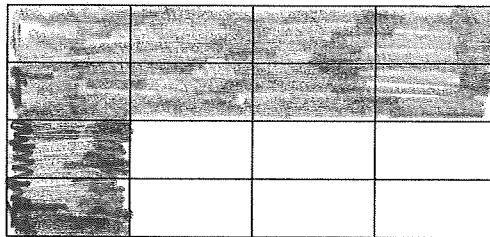
4. (a) What fraction of this shape is shaded?



$\frac{1}{3}$
.....

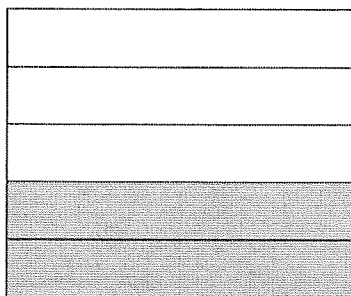
(1)

(b) Shade $\frac{5}{8}$ of this shape.



(1)

(c) What fraction of this shape is shaded?

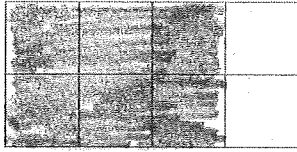


$\frac{2}{5}$
.....

(1)

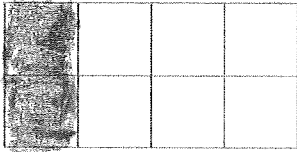
(Total 3 marks)

5. (a) Shade $\frac{3}{4}$ of this shape.



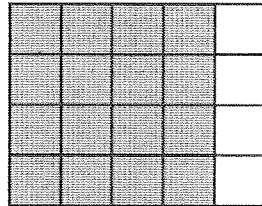
(1)

- (b) Shade 0.25 of this shape.



(1)

- (c)



What fraction of the shape is shaded?
Give your answer in its simplest form.

$$\frac{16}{20} = \frac{4}{5}$$

(Handwritten: 16 and 20 have a bracket above them with '÷4' written above the bracket. Similarly, 4 and 5 have a bracket below them with '÷4' written below the bracket.)

..... $\frac{4}{5}$

(1)

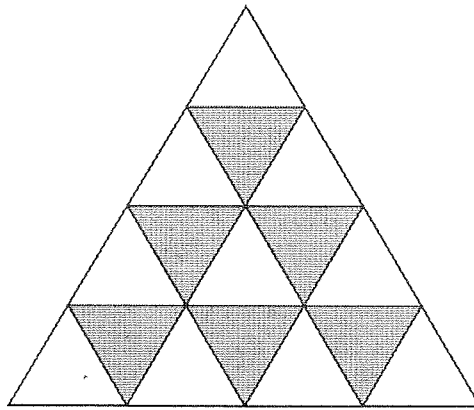
- (d) What fraction of the shape is **not** shaded?

..... $\frac{1}{5}$

(2)

(Total 5 marks)

6.



What fraction of the large triangle is shaded?
Give your fraction in its simplest form.

$$\frac{6}{16} = \frac{3}{8}$$

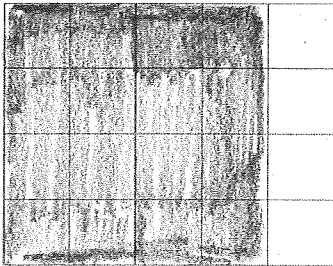
$\frac{3}{8}$

(Total 2 marks)

7. Here are two fractions $\frac{4}{5}$ and $\frac{3}{4}$

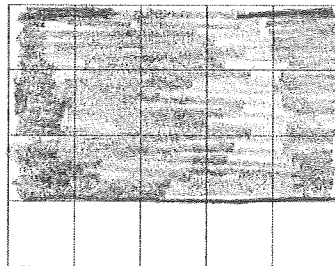
Explain which is the larger fraction.

You may use the grids to help with your explanation.



$\frac{4}{5}$

$$\frac{4}{5} = \frac{16}{20}$$



$\frac{3}{4}$

$$\frac{3}{4} = \frac{15}{20}$$

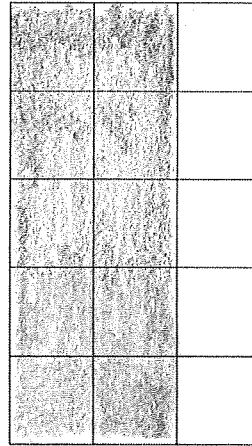
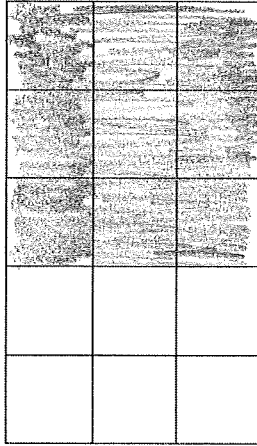
$\frac{4}{5}$ is the larger fraction as it is equivalent to $\frac{16}{20}$ whereas $\frac{3}{4}$ is equivalent to $\frac{15}{20}$

(Total 3 marks)

8. Here are two fractions $\frac{3}{5}$ and $\frac{2}{3}$.

Explain which is the larger fraction.

You may use the grids to help with your explanation.



$$\frac{2}{3} = \frac{9}{15}$$

$$\frac{3}{5} = \frac{10}{15}$$

$\frac{2}{3}$ is the larger fraction because
it is equivalent to $\frac{10}{15}$ whereas
 $\frac{3}{5}$ is equivalent to $\frac{9}{15}$

(Total 3 marks)