

TGMT

PRACTICE

PAPER

FOR GCSE MATHS

A PRACTICE PAPER TO HELP YOU
PASS YOUR GCSE MATHS EXAM

FOUNDATION TIER

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GCSE Mathematics
Practice Paper 2023
Paper 1 (Non-Calculator)

Foundation Tier



GCSE
Maths Tutor



How it all Works!

Work through the practice booklet,
scan the code, watch the live
tutorial and check your answers!

Try it out!

Disclaimer: There is no guarantee that any specific topic will be examined this way in the summer and you cannot rely on this as your only source of revision. Please visit the YouTube channel for in depth lessons on each of the topics within this document along with any recommended revision that has been instructed by your education provider.

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Answer ALL questions.
Write your answers in the spaces provided.
You must write down all the stages of your working.

1. Write the following numbers in order of size.
Start with the smallest number.

-3 4 0 -1 2

.....
(1 mark)

2. Write $\frac{3}{5}$ as a percentage.

..... %
(1 mark)

3. Write down a factor of 60 that is between 8 and 14

.....
(1 mark)

4. Write the following numbers in order of size.
Start with the smallest number.

0.4 0.02 0.37 0.152 0.2

.....
(1 mark)

5. Simplify $2m \times 3$

.....
(1 mark)

6. Here are four numbers.




-9 -2 2 9

Write one of these numbers in each box to make a correct calculation.

$$\boxed{\text{.....}} + \boxed{\text{.....}} = -7$$

(1 mark)

7. The incomplete pictogram shows information about the number of wheels sold in a shop on Tuesday, on Wednesday and on Thursday.

Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Key:

A total of 20 wheels were sold on Tuesday, Wednesday and Thursday.

8 wheels were sold on Friday. 15 wheels were sold on Saturday.

Use this information to complete the pictogram.

(3 marks)

8. Write down an example to show that each of the following two statements is not correct.

a) The factors of an even number are always even.

.....

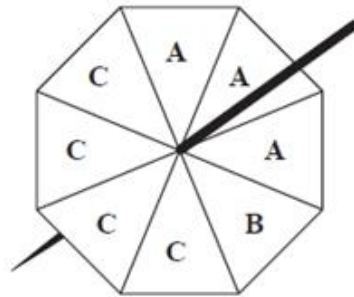
(1 mark)

b) All the digits in odd numbers are odd.

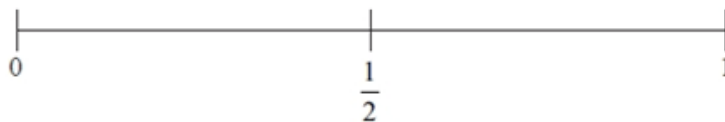
.....

(1 mark)

9. Amy spins a fair 8-sided spinner.

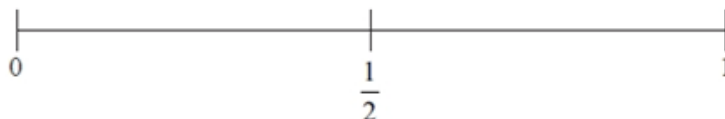


a) On the probability scale, mark with a cross (X) the probability that the spinner will land on C.



(1 mark)

b) On the probability scale, mark with a cross (X) the probability that the spinner will land on D.



(1 mark)

10. Dave goes into a café and buys 2 cups of coffee and a piece of cake.

Each cup of coffee costs £2.75

The cake costs £2.90

Dave pays with a £10 note.

He thinks he will get more than £1.50 in change.

Is Dave correct?

You must show how you get your answer.

(3 marks)

11. a) Here is a list of four fractions.

$$\frac{4}{16} \quad \frac{2}{8} \quad \frac{15}{60} \quad \frac{3}{9}$$

One of these fractions is not equivalent to $\frac{1}{4}$

Write down this fraction.

b) Work out $\frac{2}{3} - \frac{1}{5}$

.....
(1 mark)

c) Work out $\frac{2}{3} \div \frac{3}{4}$

.....
(2 marks)

.....
(2 marks)

12. a) Solve $m + m + m = 12$

.....
(1 mark)

b) Solve $\frac{x}{2} = 6$

.....
(1 mark)

c) Solve $6n + 2 = 20$

.....
(2 marks)

13. Here is a sequence of patterns made with counters



pattern number 1



pattern number 2



pattern number 3

a) Find an expression, in terms of n , for the number of counters in pattern number n .

(2 marks)

b) Ciara has 90 counters.

Can Ciara make a pattern in this sequence using all 90 counters?

You must show how you get your answer.

(2 marks)

14. a) Write down the value of $\sqrt{64}$

.....
(1 mark)

b) Work out the value of 5^3

.....
(1 mark)

15. Nazmin is going to use these instructions to make a fizzy drink.

Mix 5 parts of apple juice
With 2 parts lemonade

Nazmin thinks that she has 300ml of apple juice and 200ml of lemonade.

a) If Nazmin is correct, what is the greatest amount of fizzy drink she can make?

..... ml
(3 marks)

Nazmin has 300ml of apple juice but she only has 160ml of lemonade.

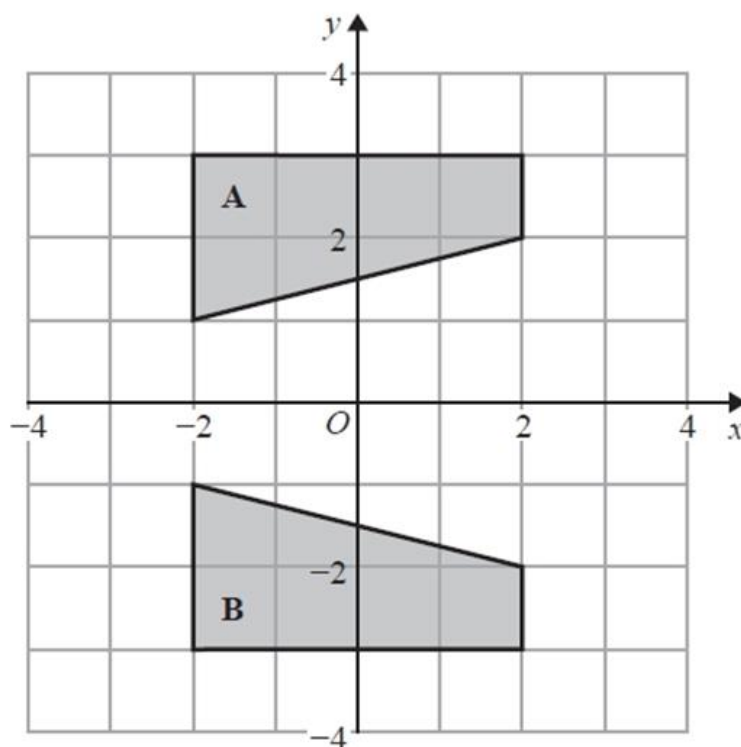
b) Does this affect the greatest amount of fizzy drink she can make?
Give a reason for your answer.

.....
.....
(1 mark)

16. a) Work out an estimate for $\frac{790 \times 289}{49}$

.....
(3 marks)

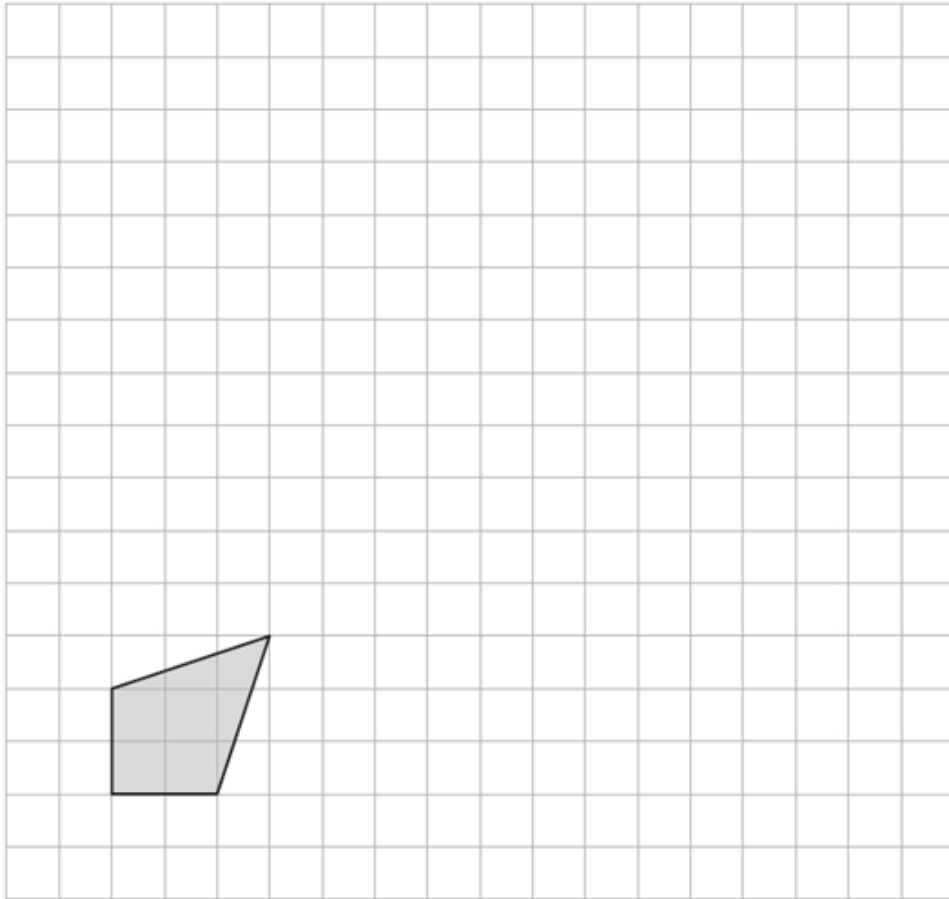
17.



a) Describe fully the single transformation that maps shape A onto shape B.

.....
.....

(2 marks)



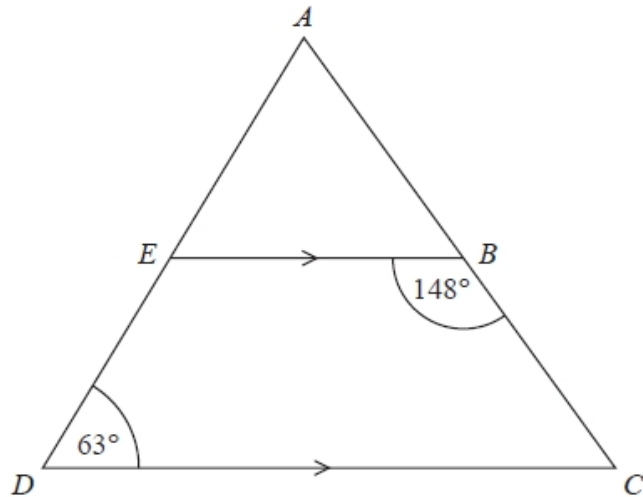
b) On the grid, draw an enlargement of the shaded shape with a scale factor of 3.

(2 marks)

18. Dave invests £400 for 5 years in a savings account.
The account pays a simple interest rate of 3.5% per year.
Work out the total amount of interest Dave gets.

£.....
(3 marks)

19. ACD is a triangle



AED and ABC are straight lines.

EB is parallel to DC.

Work out the size of angle BAE.

You must give a reason for each stage of your working.

.....
(5 marks)

20. Work out the lowest common multiple (LCM) of 24 and 56

.....
(2 marks)

21. In a bag there are only red counters, blue counters, green counters and yellow counters.

A counter is taken at random from the bag.

Colour	red	blue	green	yellow
Probability	0.4	0.25

The number of blue counters : the number of green counters = 3 : 4

Complete the table.

(4 marks)

22. Here are the first five terms of an arithmetic sequence.

-3 1 5 9 13

Find an expression, in terms of n , for the n th term of this sequence.

.....
(2 marks)

23. One sheet of A3 card has an area $\frac{1}{8}m^2$

The card has a mass of 160g per m^2

Work out the total mass of 25 sheets of A3 card.

.....
(4 marks)

24. a) Expand and simplify $3(y - 2) + 5(2y + 1)$

.....
(2 marks)

b) Simplify $5u^2w^4 \times 7uw^3$

.....
(2 marks)

25. a) Write 1.63×10^{-3} as an ordinary number

.....
(1 mark)

b) Write 438 000 in standard form.

.....
(1 mark)

c) Work out $(4 \times 10^3) \times (6 \times 10^{-5})$
Give your answer in standard form.

.....
(2 marks)

26. There are 240 bottles of drink on a shelf.

Each bottle contains apple or lemonade or orange

The bottles are in the ratio:

$$\text{apple} : \text{lemonade} : \text{orange} = 5 : 3 : 2$$

$\frac{1}{2}$ of the bottles of lemonade and $\frac{1}{12}$ of the bottles of orange are removed from the shelf.

Work out the number of bottles of apple as a percentage of the total number of bottles remaining on the shelf.

.....%
(5 marks)

27. Here is a rectangle.

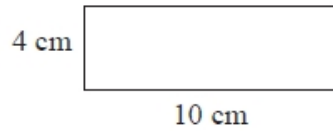
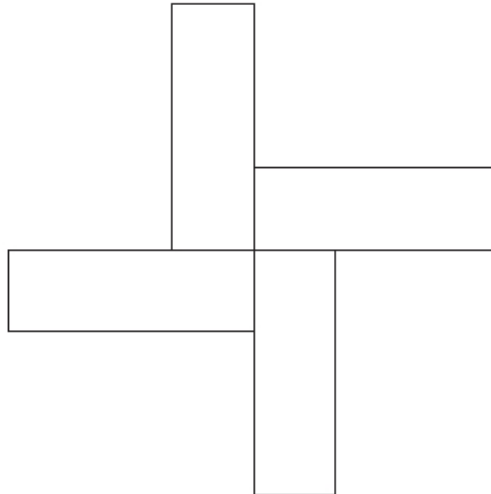


Diagram NOT accurately drawn

The 12-sided shape below is made using 4 of these rectangles.



Work out the perimeter of the shape.

.....cm
(3 marks)

28. a) Write down the exact value of $\cos 60^\circ$

.....
(1 mark)

b)



Given that $\sin 30^\circ = 0.5$

Work out the value of x .

.....
(2 marks)

29. Salma drove from London to Birmingham. It took her 3 hours at an average speed of 80km/h.

Karl drove from London the Birmingham.

He took 5 hours.

Assuming that Karl drove along the same roads as Salma and did not take a break,

a) Work out Karl's average speed from London to Birmingham.

.....km/h
(3 marks)

b) If Karl did not drive along the same roads as Salma, explain how this could affect your answer to part (a).

.....
.....

(1 mark)

End of Paper