

GL South West Hertfordshire Mock 2 Mathematics



Paper A

Mathematics

50 minutes

60 marks

- This is a multiple-choice paper. Mark your answer to each question on the separate answer sheet. You should mark only one answer for each question.
- If you are not sure of an answer, choose the one you think is best. If you cannot do a question, leave it and move onto the next.
- Work as quickly and carefully as you can.

Please turn over the page to begin the practice section for the

Mathematics Test.

Maths Practice Section

(Untimed)

This practice section gives an example of the sort of questions you will be faced with in this test, with the correct answer filled in on the answer sheet so that you can see how to do it.

There are also some practice questions that don't have the answers filled in, so that you can practise working them out for yourself and filling in the answer sheet.

Work out the correct answer and mark its letter on the answer sheet.

A Example

A rectangle has a length of 12cm and a width of 7cm. What is the area of the rectangle?

A. 84cm^2 B. 64cm^2 C. 38cm^2 D. 96cm^2 E. 76cm^2

The answer is **84cm^2** . You can work this out by multiplying the length of the rectangle by the width of the rectangle. The calculation is:

$$12 \times 7 =$$

The correct answer has been marked on your answer sheet.

Now try these practice questions.

Work out the correct answer and mark it on the answer sheet.

1 Practice

Which number is a multiple of both 4 and 9?

- A. 18 B. 24 C. 32 D. 36 E. 40

2 Practice

If one pencil costs 85p, how much would it cost to buy 6 pencils?

- A. £4.70 B. £5.10 C. £5.25 D. £5.40 E. £6.10

END OF PRACTICE SECTION

The Mathematics Test begins on the next page.

- You have 50 minutes to complete the mathematics test.
- There are 60 questions to answer.
- Your time will start when you turn over the page.
- Do not turn over the page until you are told to do so.

Maths
(50 minutes)

Work out the correct answer and mark its letter on your answer sheet.

- 1** What is $\frac{1}{3}$ of $2\frac{1}{2}$?
- A** $\frac{5}{6}$ **B** $\frac{1}{3}$ **C** $1\frac{1}{4}$ **D** $\frac{4}{7}$ **E** $\frac{2}{3}$
- 2** A book costs £6.80. If you buy three copies, how much change would you get from £25?
- A** £20.40 **B** £3.20 **C** £4.60 **D** £5.20 **E** £4.40
- 3** There are 36 apples in a basket. $\frac{1}{3}$ of the apples are green and the rest are red. How many apples are red?
- A** 18 **B** 24 **C** 30 **D** 12 **E** 26
- 4** Alice has 3 times as many apples as Bob. Together, they have 48 apples. How many apples does Bob have?
- A** 12 **B** 16 **C** 18 **D** 14 **E** 24
- 5** What is the next prime number after 17?
- A** 18 **B** 19 **C** 21 **D** 23 **E** 27

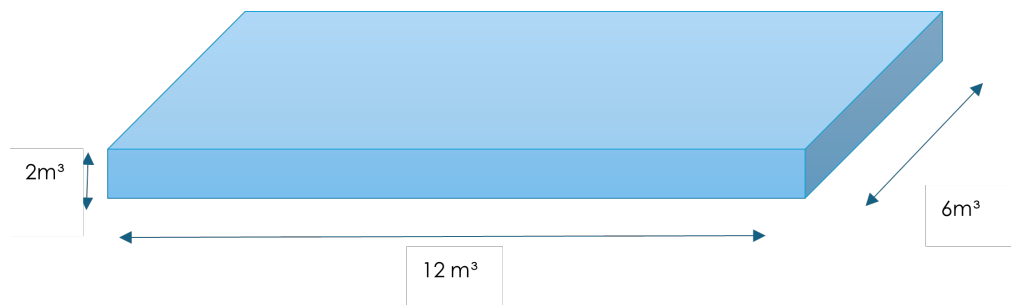
6 What is the value of x in $7x + 4 = 32$?

- A 3 B 5 C 6 D 7 E 4

7 Calculate the value of $5^2 + 3^2$.

- A 22 B 16 C 25 D 34 E 10

8 A pool is in the shape of a rectangular prism with a length of 12 metres, a width of 6 metres, and a depth of 2 metres. What is the capacity of the pool in cubic metres?



- A 144m^3 B 150m^3 C 180m^3 D 120m^3 E 200m^3

9 Use this table of information to answer questions 9 & 10.

A stationery shop offers the following prices for their products:

Pack of 3 pens	Pencils	Pack of 5 highlighters	Pack of 4 rubbers
£1.20	25p each	£3.50	£1.60

What will it cost to buy 12 pens, 10 pencils, and 5 highlighters?

- A £9.40 B £10.00 C £10.80 D £9.80 E £11.20

10 Which item is best value for money per unit?

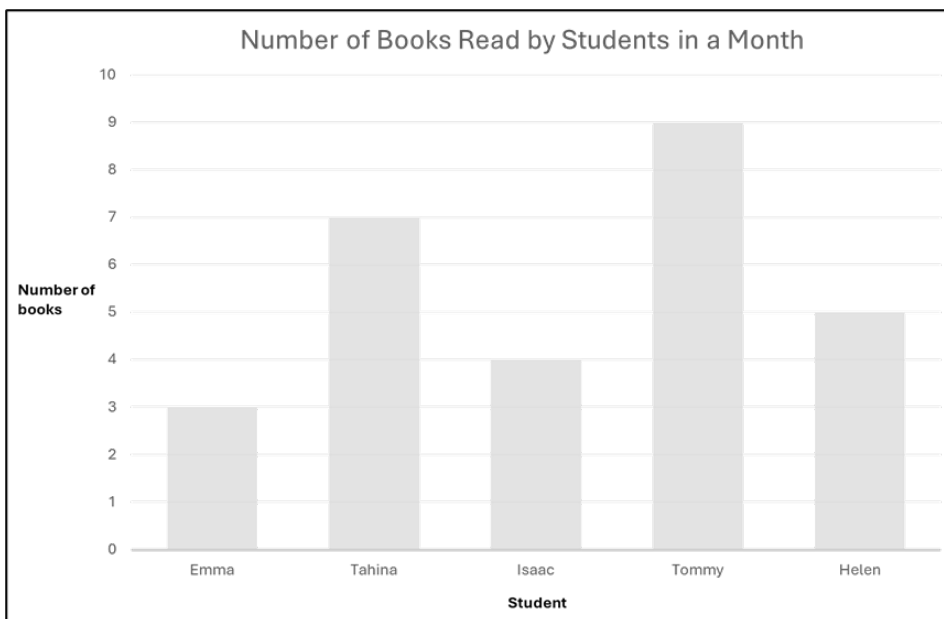
- A Pen B Pencil C Highlighter D Rubber E All are equal

11 Which is the largest number?

0.45 $\frac{3}{4}$ $\frac{1}{3}$ 0.5 $\frac{2}{5}$

- A 0.45 B $\frac{3}{4}$ C $\frac{1}{3}$ D 0.5 E $\frac{2}{5}$

The graph below shows the number of books read in a month by a group of students. Use the graph to answer questions 12 – 14.



12 What is the range of the number of books read by the students?

- A 5 B 6 C 7 D 8 E 4

- 13** What is the total number of books read by the students?
- A** 26 **B** 27 **C** 28 **D** 29 **E** 30
- 14** How many more books did Tahina read than Isaac?
- A** 3 **B** 4 **C** 5 **D** 6 **E** 7
- 15** Calculate $\frac{3}{8} + \frac{1}{2} =$
- A** $\frac{7}{8}$ **B** $\frac{3}{4}$ **C** $\frac{2}{3}$ **D** 1 **E** $1\frac{1}{4}$
- 16** Calculate $6.8 \times 9.5 =$
- A** 65.2 **B** 63.5 **C** 62.2 **D** 60.8 **E** 64.6
- 17** Find 35% of 160.
- A** 48 **B** 56 **C** 8 **D** 16 **E** 36
- 18** Sophie wants to buy 3 books. The first book costs two pounds less than the second book, and the third book costs a pound more than the first book. The second book costs £8. How much does the third book cost?
- A** £1 **B** £7 **C** £3 **D** £8 **E** £9

- 19** A train travels at a speed of 60 km/h. How far will it travel in 3.5 hours?
- A** 210km **B** 200km **C** 180km **D** 240km **E** 150km
- 20** A piece of ribbon is 5 meters long. If it is cut into pieces that are each 25 cm long, how many pieces can be made?
- A** 20 **B** 10 **C** 15 **D** 25 **E** 30
- 21** I think of a number.
I double my number and then add 25.
The final result is 93.
What was the number I started with?
- A** 44 **B** 38 **C** 40 **D** 34 **E** 48
- 22** Let $A = 6$ and $C = 10$.
If $A^2 + B^2 = C^2$, what is the value of B ?
- A** 4 **B** 5 **C** 6 **D** 7 **E** 8

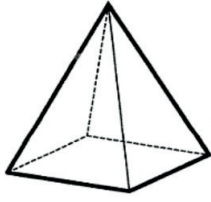
- 23** Mr. Green's class recorded the number of different genres of books they read in a month. The genre of books and the number of each read are shown below:

Fiction	Non-Fiction	Mystery	Fantasy
40	25	15	20

What percentage of the books were fiction?

- A** 12% **B** 50% **C** 64% **D** 40% **E** 30%
- 24** $\frac{5}{8}$ of a number N is 75. What is $\frac{1}{4}$ of N?
- A** 120 **B** 15 **C** 30 **D** 18 **E** 25
- 25** The perimeter of a rectangle is 36 cm. If the length is 10 cm, what is the width?
- A** 8cm **B** 6cm **C** 4cm **D** 3cm **E** 5cm
- 26** Round 22.876 to 2 decimal places.
- A** 22 **B** 22.97 **C** 22.87 **D** 22.88 **E** 22.9

- 27 The diagram shows a square-based pyramid.



How many edges does the pyramid have?

- A 4 B 5 C 6 D 7 E 8
- 28 What is the product of 12 and 8.5?

- A 102 B 108 C 98 D 102.5 E 100

- 29 Which is the smallest number?

0.4 $\frac{3}{5}$ $\frac{2}{3}$ 0.25 $\frac{5}{10}$

- A 0.4 B $\frac{3}{5}$ C $\frac{2}{3}$ D 0.25 E $\frac{5}{10}$

- 30 A headteacher is arranging for the children to go to the theatre. They will hire minibuses to take the children to the theatre. Each bus takes 16 children. There are 150 children in total.

How many buses will the school need to take all the children to the theatre?

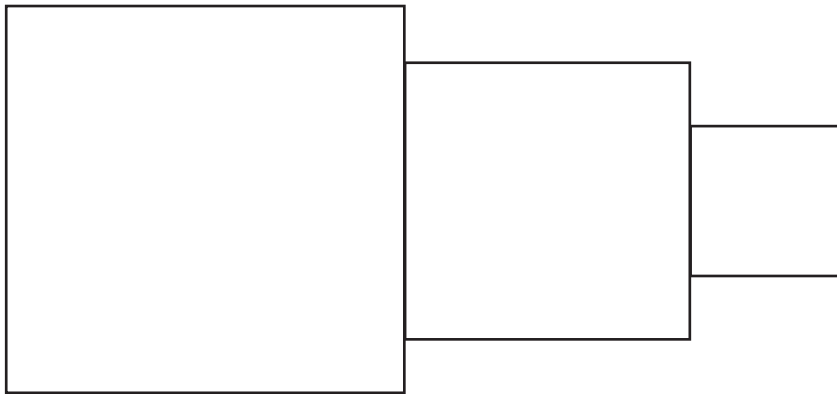
- A 5 B 7 C 9 D 10 E 11

- 31** Jane is watching birds play in her garden. She noted that 3 out of 7 were pigeons. She recorded 42 birds in total.

How many birds were not pigeons?

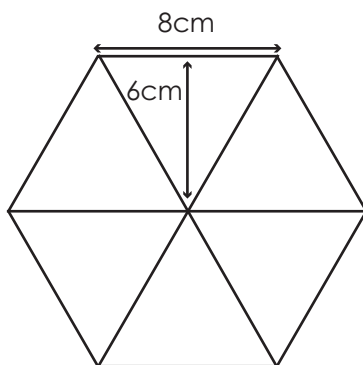
- A** 10 **B** 15 **C** 18 **D** 24 **E** 30

- 32** A square of area 49cm^2 , a square of perimeter 20cm and a square of area 9cm^2 are positioned next to each other, as shown below.



What is the perimeter of the new shape formed?

- A** 38cm **B** 40cm **C** 41cm **D** 43cm **E** 44cm
- 33** The hexagon is made up of 6 identical triangles.



What is the area of the hexagon?

- A** 120cm^2 **B** 144cm^2 **C** 160cm^2 **D** 220cm^2 **E** 288cm^2

- 34** 75 children from across reception and Year 1 were asked what their favourite animal was.

	Reception	Year 1
Rabbit	12	8
Dog	?	37
Hamster	4	6

How many Reception children said that dogs were their favourite animal?

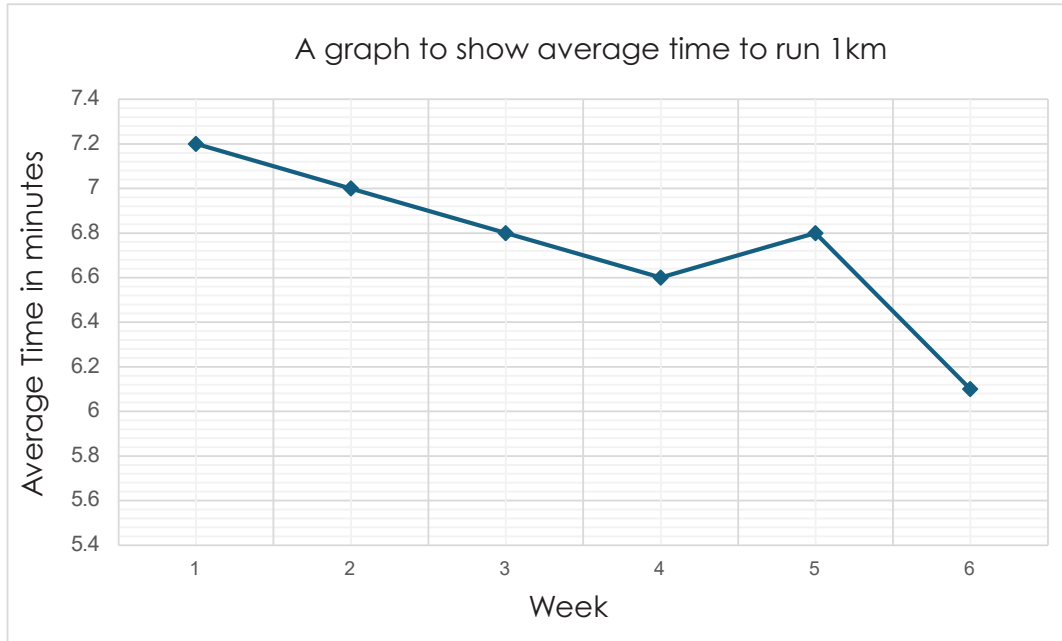
- A** 12 **B** 59 **C** 8 **D** 24 **E** 17
- 35** This is a coach timetable. **Use this table to answer questions 10 and 11.**

Explore Coaches – Daily Timetable (Monday – Friday)				
	Coach A	Coach B	Coach C	Coach D
Parkside	08:15	09:30	10:45	11:05
Riverview	08:45	10:00	11:15	11:37
Hilltop	09:10	10:30	11:40	12:15
Market Square	09:45	11:05	12:20	12:56

Liam wants to travel from Riverview to Market Square in the shortest possible time. Which coach should he take?

- A** Coach A **B** Coach B **C** Coach C **D** Coach D **E** All coaches take the same amount of time.
- 36** If Coach D is delayed at Parkside by 7 minutes and delayed at Riverview by a further 6 minutes, what time will it arrive at Hilltop?
- A** 11:50 **B** 12:20 **C** 12:28 **D** 12:15 **E** 13:38

The graph below shows the average time it took year 6 students to run 1km over a six-week period. Use the graph to answer questions 37 – 39.



- 37** What was the average running time in week 4?
- A** 7.2 minutes **B** 7 minutes **C** 6.8 minutes **D** 6.6 minutes **E** 6.2 minutes
- 38** How many weeks had an average time less than 6.7 minutes?
- A** 1 week **B** 2 weeks **C** 3 weeks **D** 4 weeks **E** 5 weeks
- 39** What is the difference in average time for week 1 to week 6?
- A** 1 minute **B** 1.1 minutes **C** 0.6 minutes **D** 1.2 minutes **E** 1.8 minutes

- 40** Calculate $23.6 + 14.9 =$
- A** 38.2 **B** 37.4 **C** 38.5 **D** 37.7 **E** 37.15
- 41** $(4X)^3 = 512$
What is the value of X?
- A** 2 **B** 4 **C** 8 **D** 16 **E** 20
- 42** A school has 480 pupils. 40% of the pupils are boys. 25% of the girls wear glasses. How many girls wear glasses?
- A** 72 **B** 192 **C** 288 **D** 55 **E** 98
- 43** A bag contains 4 red counters, 3 blue counters and 5 green counters. One counter is picked at random.
What is the probability that the counter is not green?
- A** $\frac{2}{6}$ **B** $\frac{5}{12}$ **C** $\frac{7}{12}$ **D** $\frac{3}{12}$ **E** $\frac{1}{3}$
- 44** Jasmine pours out 300ml of juice from a full jug. She has poured out $\frac{3}{8}$ of the juice in the jug. How much juice was in the jug to start with?
- A** 500ml **B** 750ml **C** 600ml **D** 800ml **E** 900ml

- 45** In a sweet shop, the ratio of chocolate bars to sweets is 3:5. If there are 120 sweets, how many chocolate bars are there?

A 45 **B** 60 **C** 72 **D** 75 **E** 80

- 46** A teacher recorded the results of 9 children in a maths test. The test was out of 20 marks.

Child 1	Child 2	Child 3	Child 4	Child 5	Child 6	Child 7	Child 8	Child 9
8	11	7	16	3	10	13	8	5

What is the average result for the maths test?

A 7 **B** 8 **C** 9 **D** 10 **E** 11

- 47** Which of these numbers is a multiple of both 6 and 8?

A 24 **B** 36 **C** 42 **D** 30 **E** 32

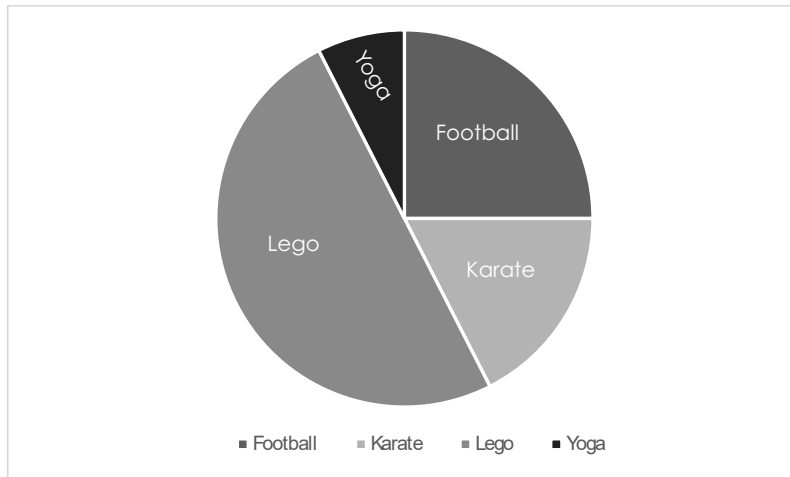
- 48** Five bakers each baked a tray of cupcakes. Their baking times in minutes (m) and / or seconds (s) are shown in the table below.

Baker 1	Baker 2	Baker 3	Baker 4	Baker 5
1.5 m	1 m 47 s	109 s	1 m 36 s	1.25 m

Who bakes their cupcakes the fastest?

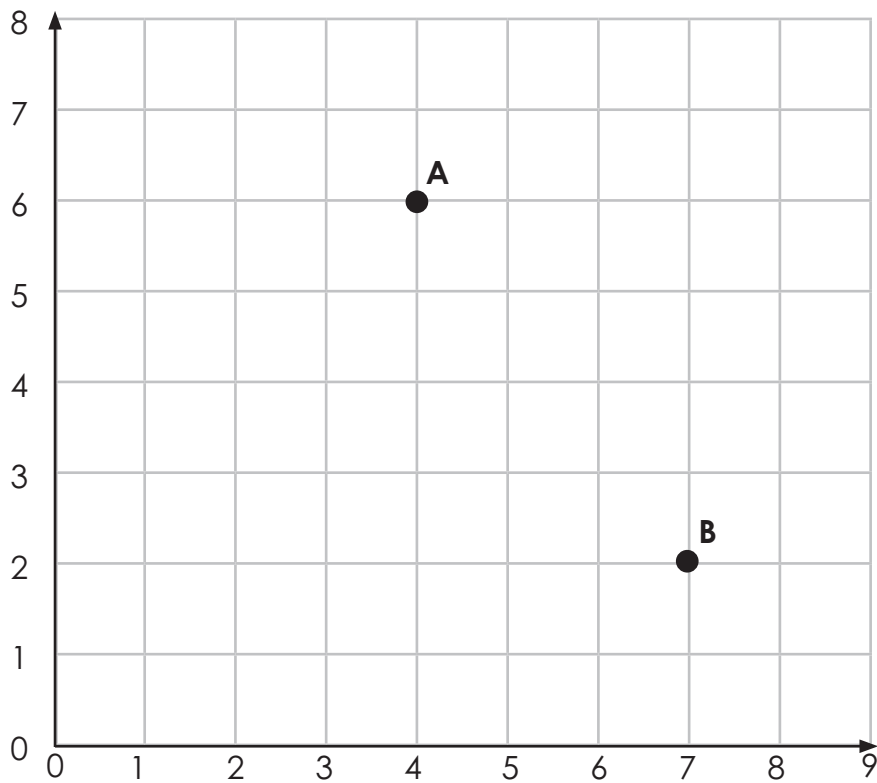
A Baker 1 **B** Baker 2 **C** Baker 3 **D** Baker 4 **E** Baker 5

- 49 200 children were asked what their favourite after school club is. 35 children voted for karate. How many said their favourite after school club was yoga?



- A 10 B 15 C 20 D 50 E 30
- 50 Calculate 20% of 5.6kg.
- A 1120g B 1.2kg C 11.2kg D 550g E 12.1kg
- 51 Five friends split the bill of £87.50 equally. How much does each person pay?
- A £16.50 B £17.00 C £17.50 D £18.00 E £18.50
- 52 In a class of 32 students, 75% passed the maths test. How many students did NOT pass the maths test?
- A 6 B 8 C 10 D 12 E 24

53 Point A has been translated to Point B.



Which one of the following describes the correct translation?

- A 5 down, 3 right
- B 2 right, 4 down
- C 3 left, 4 down
- D 3 right, 5 down
- E 3 right, 4 down

- 54** Matilda saved £11.50 a week for 25 weeks. How much has she saved altogether?
- A** £256.50 **B** £275.00 **C** £281.25 **D** £287.50 **E** £300.00
- 55** A spinner has 10 equal sections numbered 1–10. What is the probability of landing on a number less than 5?
- A** $\frac{3}{8}$ **B** $\frac{2}{5}$ **C** $\frac{3}{10}$ **D** $\frac{3}{5}$ **E** $\frac{5}{10}$
- 56** What is the value of x in this equation: $(x - 3) \times 3^2 = 54$
- A** 6 **B** 7 **C** 8 **D** 9 **E** 10
- 57** In a poll of 500 children, 425 said they liked chocolate. What percentage did NOT like chocolate?
- A** 15% **B** 20% **C** 25% **D** 30% **E** 35%
- 58** In a number sequence, each term increases by 4. The second term is 5. What is the 8th term?
- A** 13 **B** 25 **C** 29 **D** 33 **E** 37

- 59 Three toy cars and two toy trains are arranged in the following way on a playmat.



CTCTC is one way they can be ordered.
CCTCT is another way they can be ordered, and so on.

How many different ways, including those already mentioned above, can the toys be ordered if the toy trains must never be next to each other?

- A 3 B 5 C 6 D 7 E 8
- 60 Temperatures in a city fell from 3°C to -6°C overnight. What was the change in temperature?
- A 3°C B 5°C C 7°C D 9°C E 6°C

END OF MATHEMATICS TEST.

