11+ GL Mathematics Paper 1

Instructions:

- You have 40 minutes to answer 40 questions.
- Carefully read through each question before answering.
- Put a line through the correct answer in your answering booklet by choosing one of the options A-E.

Example:

The **Correct** way to mark your answers on the answer sheet:

Correct

The **Incorrect** way to mark your answers on the answer sheet:

Incorrect

Use a pencil to mark your answers. **Rub out any errors**, do not cross them out.
Please take care when marking your answers on your answer sheets.
Make sure you mark your answer **on the line that matches the question number and mark only one answer per line.**

Information about the test papers:

- The page number is in the top right corner of each page.
- The title of each section is provided in the box at the top of each page.
- The timings for the different sections are shown on the example pages.

Instructions at the bottom of the pages inform you:

- If you can continue to the next page
- When you should wait for instructions before you turn the page
- When you have reached the end of a section.

The following symbols and phrases are used on the test papers.

Go to the next page.

Do not turn the page until told to do so.

Stop working and await instructions.

1) Here is part of a bus timetable.

Acton Old Town	....	....	....	13:21	....
Wales Farm	12:56	13:01	13:10	13:27	13:30
Webb Place	....	....	....	....	....
Harlesden	....	....	....	....	....
Willesden	13:07	13:13	13:21	13:37	13:40
Brent Cross	13:12	13:18	13:27	13:43	13:45

A bus leaves Wales Farm at 13:10.

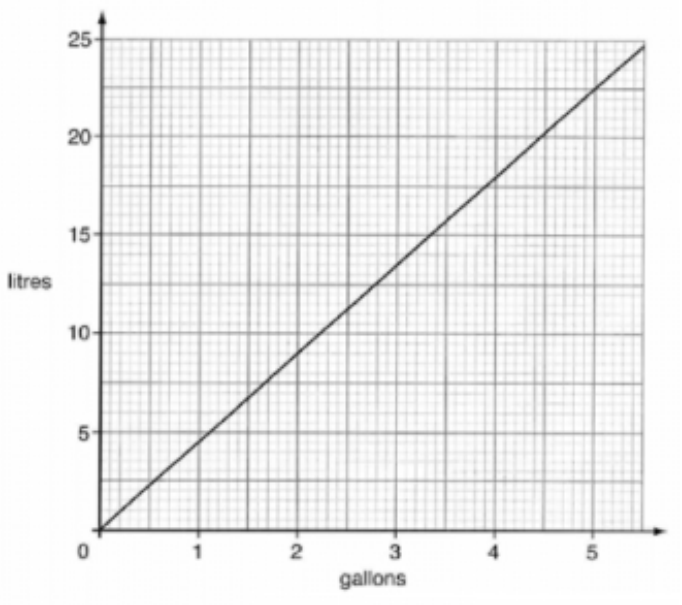
How long does it take to get to Willesden?

A	B	C	D	E
5 mins	11 mins	14 mins	19 mins	23 mins

2) What percentage of £10 is £2?

A	B	C	D	E
1%	5%	10%	20%	50%

3) Here is a graph to convert gallons into litres:



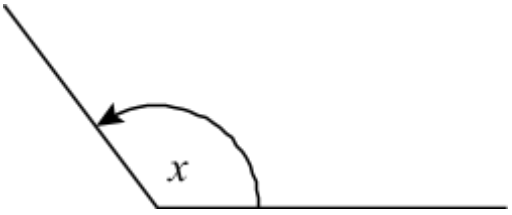
One day, John fills his car with 10 gallons of petrol. How much is this in litres?

A	B	C	D	E
10	12	30	45	70

4) 5 children want to go on a trip to Thorpe Park. The cost is £8 per person. However, a group booking of 5 reduces the normal cost by 10%.
How much would the children pay in total for the group booking?

A	B	C	D	E
£35	£36	£32.50	£28	£25

5) Look at this angle.



Which of the following could be the size of x?

A	B	C	D	E
60°	90°	200°	135°	180°

6) 90 ÷ ▽ = 6

What number does ▽ stand for?

A	B	C	D	E
4	5	6	7	15

7) This table shows how long Alfie took to cycle to work each day last week.

Day	Time taken
Monday	15 minutes
Tuesday	7 minutes
Wednesday	12 minutes
Thursday	11 minutes
Friday	10 minutes

What was the average time taken, in minutes?

A	B	C	D	E
11 mins	13 mins	15 mins	16 mins	17 mins

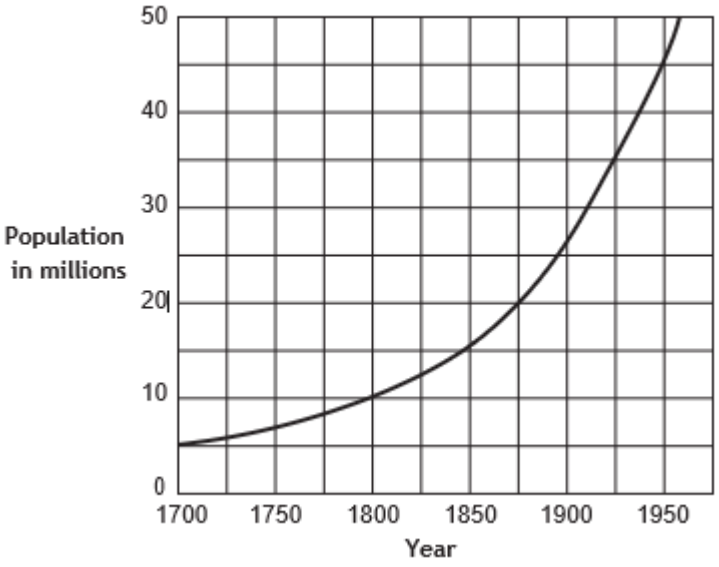
8) A boy delivered newspapers. He was paid £1.40 for every 100 papers he delivered. How much was he paid for delivering 250 papers?

A	B	C	D	E
£2.80	£3.40	£3.50	£4.20	£4.40

9) 32 ÷ 1000 =

A	B	C	D	E
32000	3.2	0.032	320	0.32

10) The graph shows the population of Britain from 1700.



How many years did it take for the population to go from 10 million to 45 million?

A	B	C	D	E
50	75	100	150	200

11) A bag had 72 marbles in it. Ella took out one eighth of the marbles.
How many marbles are left in the bag?

A	B	C	D	E
9	18	36	60	63

12) A plane travels 634 kilometres in one day.
How many kilometres does it travel in 12 days?

A	B	C	D	E
4582	5478	7680	7608	8356

13) 4 81 144

The three numbers above are alike in some ways.
Select ONE of the following to say one way in which they are alike.

A	B	C	D	E
They are all even numbers.	They are all two-figure numbers.	They are all prime numbers.	They are all square numbers.	They can all be divided exactly by 2.

14) Derek's height was 153 cm. Since then, he has grown by 24 cm.
What is his height now?

A	B	C	D	E
177 cm	175 cm	167 cm	160 cm	159 cm

15) Ashley had 7 cartons of milk. Each carton contained 650 ml.
How many litres does she have altogether?

A	B	C	D	E
4 l	4.55 l	45 l	4550 l	4750 l

16) What is 4^3?

A	B	C	D	E
8	16	24	30	64

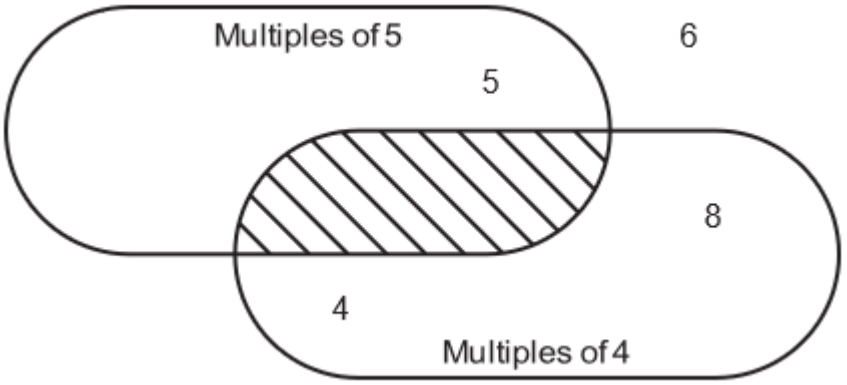
17) There were 28 apples in a bag. There were three times as many red apples as green apples.
How many red apples were there?

A	B	C	D	E
21	18	16	14	9

18) What is 70% of 250?

A	B	C	D	E
75	150	175	225.5	230

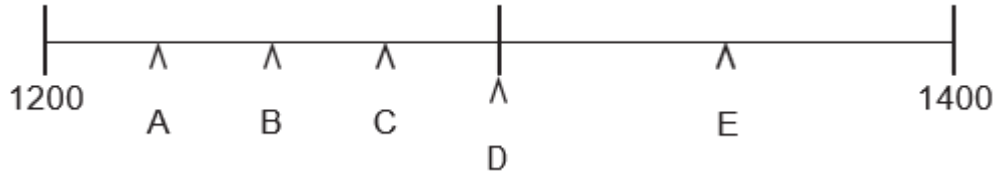
19) Look at the diagram.



Which of the following numbers could go in the shaded section?

A	B	C	D	E
9	12	15	20	24

20) Which letter is pointing at 1275?



A	B	C	D	E
A	B	C	D	E

21) Select the correct number to go in the box and complete the equation.

125 x 7 = 875

12.5 x 0.7 = ☐

A	B	C	D	E
8750	875	87.5	8.75	0.875

22) A box holds 22 books.
How many boxes are needed for 770 books?

A	B	C	D	E
34 crates	35 crates	37 crates	45 crates	49 crates

23) This chart shows the weather for 12 hours on one day.

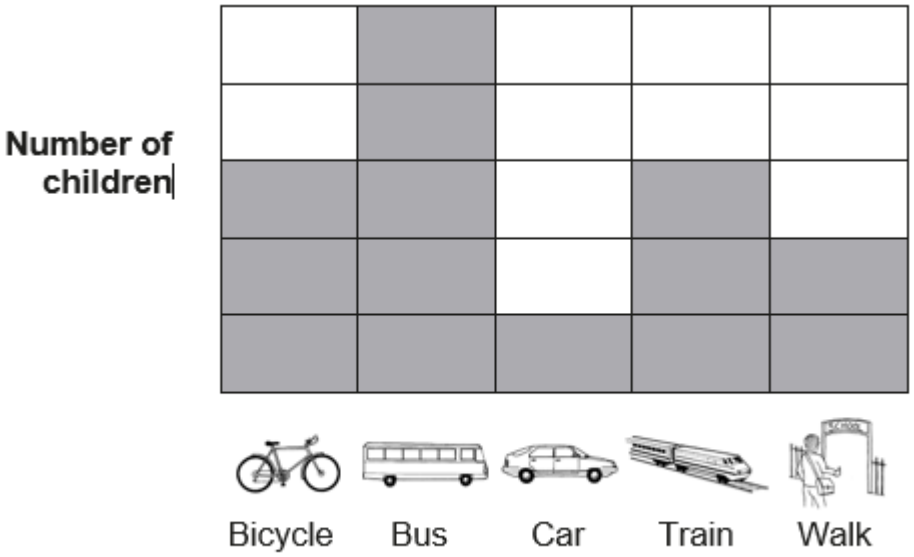
For how many hours was it raining?

A	B	C	D	E
2 hours	4 hours	6 hours	8 hours	10 hours

24) Put the correct number in the box.
33 x 99 = 3300 – ☐

A	B	C	D	E
33	34	99	130	330

25) The chart below shows the proportions of children in a class who go to school using various forms of transport. 20 children took the bus.



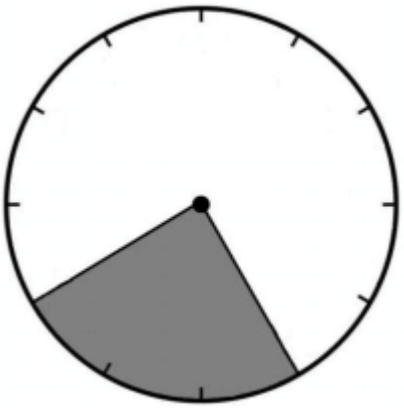
How many more children took used a bicycle than a car?

A	B		C	D	E
4	8		9	12	15

26) The average weight of 5 parcels is 3.7 kg. Four of the parcels have an identical weight of 3.5 kg.
What is the weight of the 5th parcel?

A	B	C	D	E
3 kg	3.5 kg	4 kg	4.5 kg	5 kg

27) What percentage of the shape is shaded?



A	B	C	D	E
20%	25%	30%	45%	50%

28) What is this number in figures?
Eight thousand and seventy-one

A	B	C	D	E
8710	8071	8107	80071	8701

29)  **stands for 20 ships.**
Look at this table.

Dock	Number of Ships
A	
B	
C	

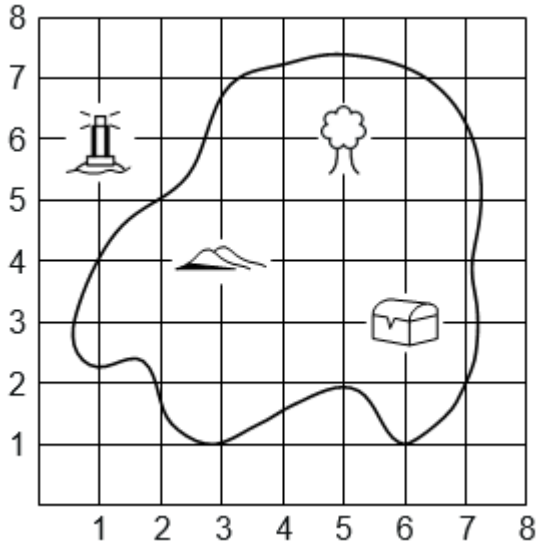
What is the difference in the number of ships between docks A and C?

A	B	C	D	E
25	30	50	80	100

30) What is the value of the 3 in this number? 23470

A	B	C	D	E
3 thousands	3 hundreds	3 tens	3 ones	3 thousandths

31) What are the co-ordinates of the treasure chest on the map below?



A	B	C	D	E
(6 , 1)	(1 , 6)	(6 , 3)	(3 , 6)	(5 , 6)

32) What is the next number in this sequence? 6 12 24 48 ?

A	B	C	D	E
54	60	70	96	120

33) Which number is 100 less than 3048?

A	B	C	D	E
2048	2848	2948	3148	3248

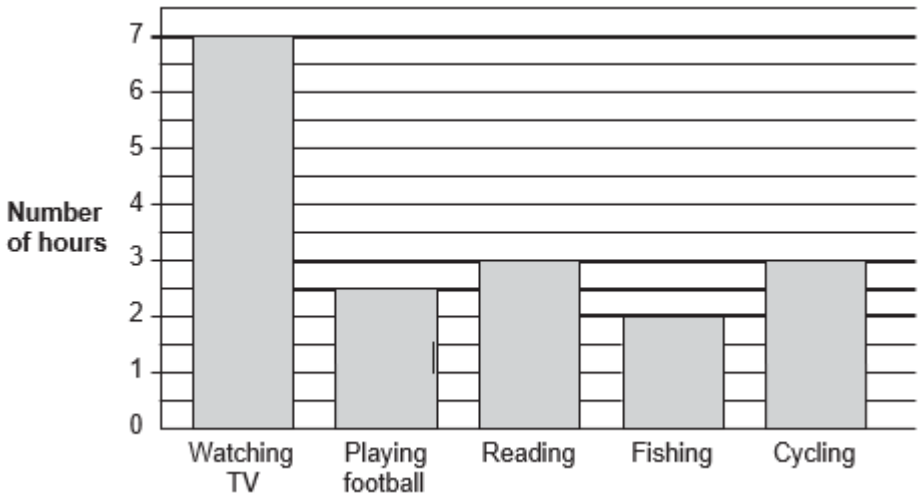
34) Caroline has 48 sweets. She eats $\frac{3}{8}$ of them. How many sweets are left?

A	B	C	D	E
18	24	30	36	42

35) How many odd three-digit numbers is it possible to make, using just the digits 3, 4 and 5? (You can use each number more than once in a particular 3-digit number.)

A	B	C	D	E
3	5	12	18	24

36) This chart shows how George spent his spare time last week.



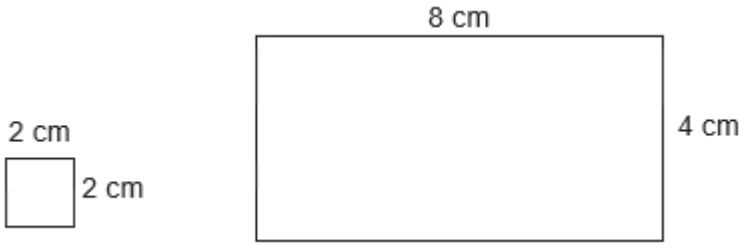
How many hours did he spend indoors (watching TV and reading)?

A	B	C	D	E
7 hours	7.5 hours	8 hours	9 hours	10 hours

37) Lauren saved £1.75 a week.
How many weeks did it take her to save £35?

A	B	C	D	E
15 weeks	20 weeks	23 weeks	26 weeks	30 weeks

38)



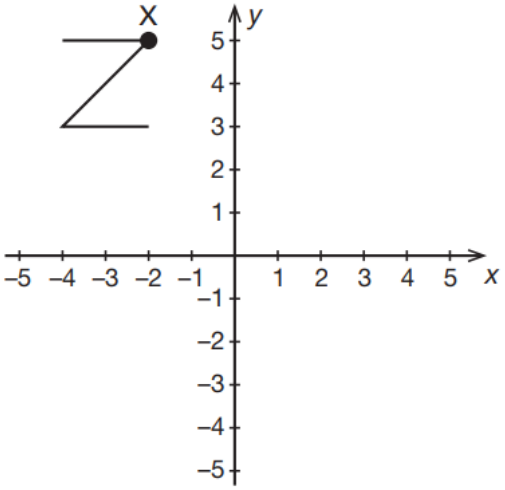
How many small squares will fit into the large rectangle?

A	B	C	D	E
5	6	7	8	10

39) The diameter of a circle is 40 cm.
How far is the centre from the circumference (in cm)?

A	B	C	D	E
40 cm	20 cm	30 cm	10 cm	25 cm

40) The Z-shape is reflected in the y-axis and again in the x-axis.
What will be the new co-ordinates of the point X?



A	B	C	D	E
(2 , 5)	(2 , -5)	(-2 , -5)	(3 , 4)	(-3 , -4)

End of paper.

Question	Answer
1	**B** 11 minutes The bus leaving Wales Farm at 13:10 reaches Willesden at 13:21. This is 11 minutes.
2	**D** 20% 2/10 = 20/100 = 20%.
3	**D** 45 litres Using the graph, 5 gallons = 22.5 litres. So, 10 gallons = 45 litres.
4	**B** £36 Normal cost = 8 x 5 = £40 10% of £40 = £4. 40 – 4 = £36
5	**D** 135^{o} This is an obtuse angle. 135^{o} is the only obtuse angle in the list.
6	**E** 15 90 ÷ 6 = 15
7	**A** 11 mins Calculate the mean. 15 + 7 + 12 + 11 + 10 = 55 minutes in total 55 ÷ 5 = 11 mins on average.
8	**C** £3.50 250 is 2.5 times greater than 100. 2.5 x 1.4 = 3.50.
9	**C** 0.032 Move the decimal 3 places to the left.
10	**D** 150 years In 1800 the population was 10 million. In 1950 the population was 45 million. 1950 – 1800 = 150 years.
11	**E** 63 72 ÷ 8 = 9 marbles are taken out. 72 – 9 = 63 marbles left.
12	**D** 7608
13	**D** They are all square numbers

	$4 = 2^2$ $81 = 9^2$ $144 = 12^2$
14	**A** 177 cm 153 + 24 = 177 cm
15	**B** 4.55 litres 7 x 650 = 4500 ml 4550 ÷ 1000 = 4.55 L
16	**E** 64
17	**A** 21 3 parts red apples + 1 part green apples = 4 parts in total. 28 ÷ 4 = 7 1 part 7 x 3 = 21 red apples.
18	**C** 175 10% = 250 ÷ 10 = 25 25 x 7 = 175
19	**D** 20 The lowest common multiple of 5 and 4 is 20.
20	**C** 1275
21	**D** 8.75 Both inputs are 10 times smaller so the output must be 100 times smaller when multiplying.
22	**B** 35 boxes 0 3 5 2 2 7 7 0 − 0 7 7 − 6 6 1 1 0 − 1 1 0 0
23	**B** 4 hours Rain covers one third of the pie chart. 12 ÷ 3 = 4 hours.

24	**A** 33 33 x 100 = 3300. So, 33 x 99 will simply be 33 less than 3300.
25	**B** 8 children 20 children took the bus which is 5 blocks. Each block is 20 ÷ 5 = 4 children. The difference between bicycle and car is 2 blocks which is 8 children.
26	**D** 4.5 kg 5 x 3.7 = 18.5 4 x 3.5 = 14 18.5 – 14 = 4.5 kg
27	**B** 25% One quarter of the circle is shaded. This is 25%.
28	**B** 8071
29	**C** 50 ships Dock A has 3 x 20 = 60 ships. Dock C has 20 ÷ 2 = 10 ships. 60 – 10 = 50 ships.
30	**A** 3 thousands
31	**C** (6 , 3)
32	**D** 96 The number doubles every term. 48 x 2 = 96.
33	**C** 2948 3048 – 100 = 2948
34	**C** 30 sweets $1 - \frac{3}{8} = \frac{5}{8}$ sweets left. 48 ÷ 8 x 5 = 30 sweets left.
35	**D** 18 numbers The numbers you can make are: 333, 335, 343, 345, 353, 355, 433, 435, 443, 445, 453, 455, 533, 535, 543, 545, 553, 545. 18 numbers.
36	**E** 10 hours Watching TV = 7 hours Reading = 3 hours 7 + 3 = 10 hours

37	**B** 20 weeks 35 ÷ 2 = 17.5 So, 35 ÷ 20 = 1.75
38	**D** 8 squares Area of small square = 2 x 2 = 4 cm^2 Area of large rectangle = 8 x 4 = 32 cm^2 32 ÷4 = 8 squares will fit.
39	**B** 20 cm Centre of the circle to the circumference is the radius. The radius is half of the diameter. Radius = 40 ÷ 2 = 20 cm
40	**B** (2 , -5) Reflection in the y-axis would move x to (2 , 5) Then, reflection in the x-axis would move x to (2 , -5)
Total	/40