Paper B

Maths Paper 11+

Name..

Candidate Number...

Seat Number...

Please put your name in the space provided above.

This maths paper contains 50 questions, which you have 40 minutes to complete.

Write your answers clearly on the paper and make sure any mistakes are erased.

You can jot any working out on this test or extra rough paper.

Q1. What is 324505 written in words?

Answer = ...

Q2. What is the value of the 6 in 756289?

Answer = ...

Q3. Mr Brown takes his two sons and two of their friends swimming. The total cost for the 5 of them is £32. The children are under 16 and get a 25% reduction of the adult price. What is the price of an adult ticket?

Answer = £ ....

Q4. What fraction, in its lowest or simplest form, is 25 minutes compared to 3 hours 20 minutes?

Answer = ...

Q5. Write $\frac{3}{4}$ as a decimal.

Answer = ...

Q6. What is the sum of all the numbers between 1 and 10 inclusive?

Answer = ...

Q7. Where does the white arrow point to on the number line below?

9.2   9.3
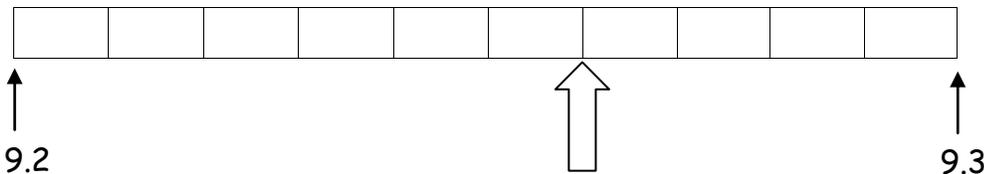
Answer = ...

Q8. A pint of milk is 568 ml. What's the fewest number of pints that you need to make sure that you have 10 litres of milk

Answer = ...

Q9. Here is a function machine. If 105 came out, what went in?

In ⟶ ⟍ Multiply by 12 ⟋ ⟶ Add 9 ⟶ Out
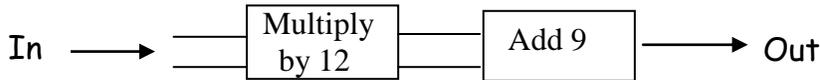
Answer = ...

Q10. The triangle denoted by the points PQR is isosceles. The largest angle R is 4 times the size of angle P. Work out angle R, measured in degrees.

R

R

Q   Q   P   P
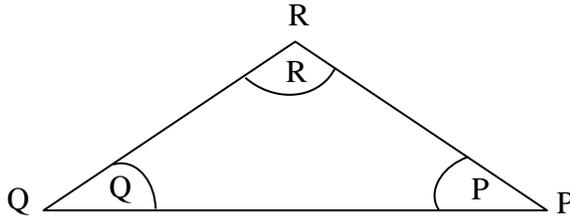
Answer = ... °

Q11. Find the product of the sum of 8 and 3 and the difference between 7 and 4.

Answer = ...

Q12. What is the obtuse angle between the two hands at 5 o'clock?

Answer = ... °

Q13. In maths, we say that the square root of 36 is 6 because 6 x 6 = 36

What is the square root of 121 ?

Answer = ...

Q14. What is the missing instruction in the decision tree below?

```
                    ( Children
                      to be sorted )
                          |
                          v
           No    /                  \    Yes
              /                         \
            v                             v
      ( Is this )                    ( Is this )
      ( child a boy? )              ( child a boy? )

    Yes         No              Yes            No
    v           v               v              v
( Boys that   ( Girls that   ( Boys that    ( Girls that
  cannot play   cannot play    can play a     can play a
  a musical     a musical      musical        musical
  instrument )  instrument )   instrument )   instrument )
```
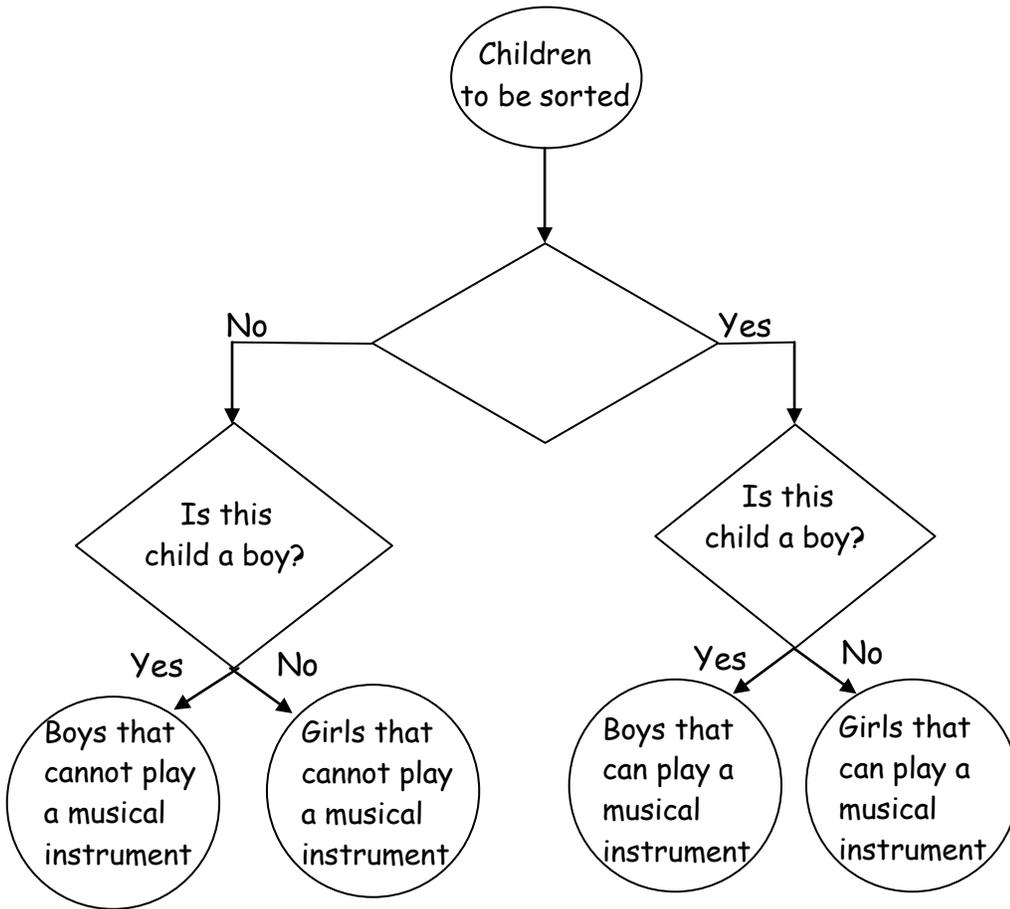
Answer = ...

Q15. Two whole numbers are between 20 and 30.
They multiply to make 575. What are the numbers?

Answer = ... and ....

Q16. Which is the faster speed, 56 km/h or 56 mph?

Answer = ...

Q17. Imogen thinks of a number and multiplies it by 4. She then subtracts 4
to get 44. What was the original number?

Answer = ...

Q18. The mean number of runs for three innings is 117.
What is the third innings if the first two are 108 and 120?

Answer = ...

Q19. Tommy weighs himself and notes he is 60. What metric units is he likely
to be using?

Answer = ...

Q20. See the grid below. The circle is 6 steps to the east of (0,0) and 2
steps north. Describe how you can move from the circle to the square.
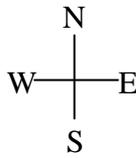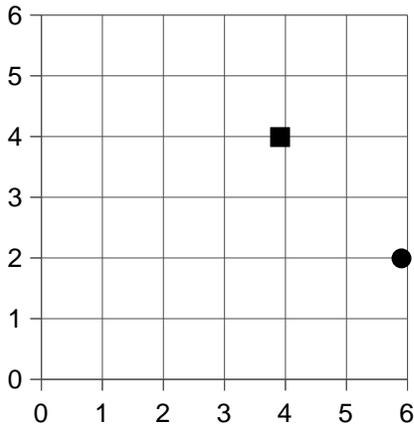
Answer = ...

Q21a.) Round 974 to the nearest 10

Answer = ...

b.) Round 39,470 to the nearest 100

Answer = ...

Q22. If Tom writes down all the numbers from 1 to 100, how many times will
he have written down a '2'?

Answer = ...

Q23. The 'FACTMAX' machine allows you to input a number. It calculates all the factors excluding 1 and itself and then adds together the two largest factors. What is FACTMAX of 16?
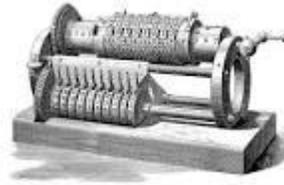
Answer = ...

Q24. The 'FACTMIN' machine allows you to input a number. It then calculates all the factors excluding 1 and itself and then adds together the two smallest factors. What is FACTMIN of 63?

Answer = ...

Q25. How many boys are in a class of 30 children if the ratio of girls to boys is 2 to 1?

Answer = ...

Q26. I have 3 coins in my pocket and they are all different in value. They could be anything from £2 coins to 1p coins. What is the difference between the largest and smallest amount of money that I could have?

Answer =£ ....

Q27. Mary is 6 times older than Jaimin. In 4 years' time, Mary will be 4 times older than Jaimin. What is Jaimin's age now?

Answer = ...

Q28. What is the next number in the sequence: 2, 5, 10, 50, __?

Answer = ...

Q29. Fill in the word that makes sense on the answer line below.

Sarah goes for a walk. She walks north for 10 minutes before turning. She now walks in a .... direction before turning and walking due west to get back home.

Answer = ...

Q30. There are 52 cards in a standard pack of shuffled playing cards. An ace is turned face up first. What is the probability of turning up a 2nd ace?

Answer = ...

Q31. Simplify and write down the answer to

$100 \times 8 \div 8 \times 2 \div 200$

Answer = ...

Q32. Look at the diagram of the park. You are sitting on a bench. How many ways are there back to the car park?
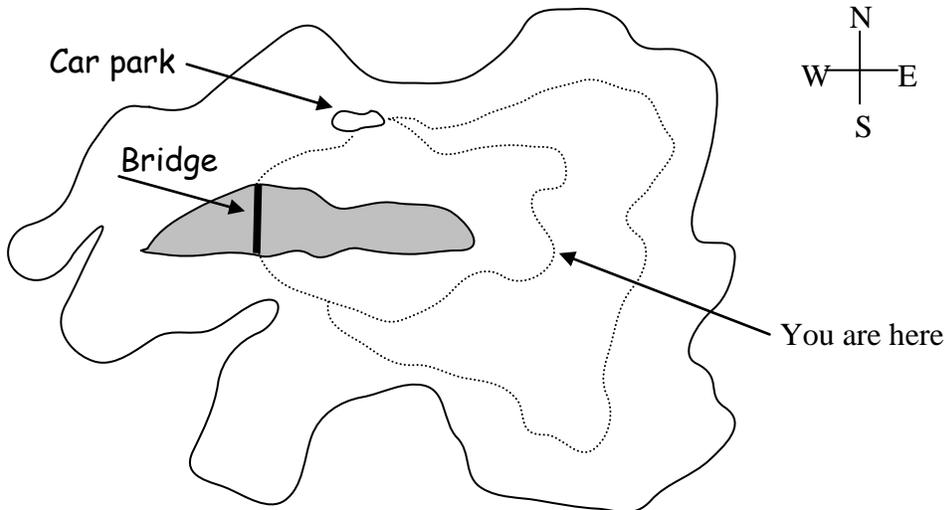
Answer = ...

Q33. Clare records her marks in spellings for 6 months. How many times did she score 14 marks?

Clare's Marks in spelling tests.
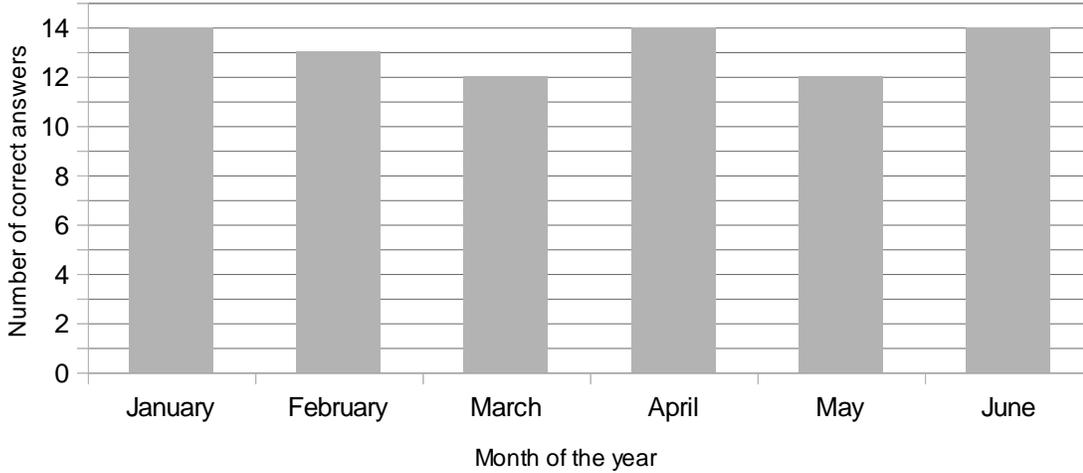
Answer = ...

Q34. Arushi increases her mark by 1 each month but she only beats Clare once in 6 months. What mark did Arushi score in January?

Answer = ...

Q35. This is a timetable for trains from Hubb to Prash.

Hubb	7.14	7.44	Then every	21.44	22.44
Charles	7.29	7.59	30	21.59	22.59
St Colt	7.49	8.19	minutes	22.19	23.19
Prash	7.57	8.27	until...	22.27	23.27

How many minutes does it take the train to get from Hubb to St Colt?

Answer = ...**minutes**

Q36. A rectangle's top left-hand corner is labelled A and the rectangle is flipped over using the line x before being flipped over again using line y. Which of the positions out of top left, top right, bottom left and bottom right is corner A now?

A □ y

x
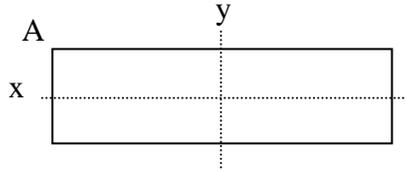
Answer = ...

Q37. I have a piece of card which I cut into many equilateral triangles of side 5cm. What is the smallest number of these equilateral triangles that can fit together to make a rhombus?

Answer = ...

Q38. What further 4-sided shape can you make using 4 equilateral triangles?

Answer = ...

Q39. Will the area of the quadrilateral in Q38 be less than, equal to or greater than 50cm²?

Answer = ...

Q40 – Q44.

The following is a table for 5 different rectangles which each have longer lengths than widths. There's one mark for each row correctly filled in. Lengths are in cm and area is measured in cm².

	Width	Length	Area	Perimeter	Difference of length and width
Rectangle 1	5	6		22	1
Rectangle 2		7	35	24	
Rectangle 3			40	26	
Rectangle 4	4			26	
Rectangle 5			32		4

9

Felix can generate number sequences on his spreadsheet where the next number in the sequence is the product of the previous two numbers.

Q45. Using Felix's spreadsheet, what is the 2nd number in this sequence:
__,   __,   36,   432 ?

Answer = ...

Q46. What is the 4th number in this sequence using Felix's spreadsheet:
2,   __,   __,   __,   108 ?

Answer = ...

Q47. Tom drives for 40 minutes at an average speed of 60km/h. Evie does the same journey but drives at an average speed of 80km/h. How much time does Evie take to do the journey?

Answer = ... **.minutes**

Q48. Work out $\frac{1}{5}$ of $\frac{2}{3}$ of 75.

Answer = ...

Q49. John has some money in his pocket. If he buys 3 magazines from a shop he gets 99p change. If instead John buys 4 magazines, he receives 32p change. How much money did John have in his pocket before going shopping. The magazines are all the same price.

Answer =**£**... .

Q50. Using the 24 hour clock, the time 3.51p.m. is 15:51 which reads the same forwards and backwards. What is the next time when this occurs?

Answer = ...

<p style="text-align:center">END OF TEST   /50</p>