Numeracy Paper

11+

Name:...

Candidate Number.......................................

Seat Number..

This paper has 50 questions, and you have 40 minutes to complete the test.

Read the questions carefully.

If you cannot answer a question, do not waste time on it. Move on to the next question and come back if you have time later.

Answers must be entered on the multiple choice answer sheet.

You may do any working out on this test paper, or on the rough paper supplied.

Look at the following numbers and then answer questions 1-10 on the multiple choice answer sheet:

9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23

1. Which number is a multiple of 2 and 9?

2. List all the prime numbers

3. Which number is 7 less than the greatest number?

4. What is the median?

5. Which number has four consecutive factors?

6. What is the difference between the number of odd and even numbers?

7. How many square numbers are listed?

8. What is the average of all the numbers?

9. Which two numbers, when added together make 45?

10. Which two numbers, when multiplied together make 231?

Find the missing numbers in the following sequences:

11.   ………,   14,   16,   19,   23,   ……....

12.   1,   1,   2,   3,   5,   8,   13,   ……….

13.   33,   11,   32,   12,   31,   13,   ……....,   14

14.   5,   10,   20,   ……..,   80,   160

15.   4,   8,   16,   28,   ………,   64

16.   2,   6,   5,   15,   14,   42,   ……….

In each of the questions 17-24, give x a value so each statement makes sense.

17. $7 + x = 17$ $x =$

18. $x - 3 = 18$ $x =$

19. $40 - 16 = x$ $x =$

20. $x + 21 = 63$ $x =$

21. $8 + x + x = 22$ $x =$

22. $57 - x - x - x = 42$ $x =$

23. $12 + x = 6 + x + x$ $x =$

24. $37 - x = x + x + 16$ $x =$

Look at the following fractions and decimals, and then answer questions 25 and 26.

　　0.33　　　1/3　　　34/100　　　2/7　　　0.303　　　0.299　　　0.31

25. Which is the smallest fraction or decimal above?

26. Which is the largest fraction or decimal above?

Bob, Mike and Jane share two pizzas that are cut into 12 slices each.
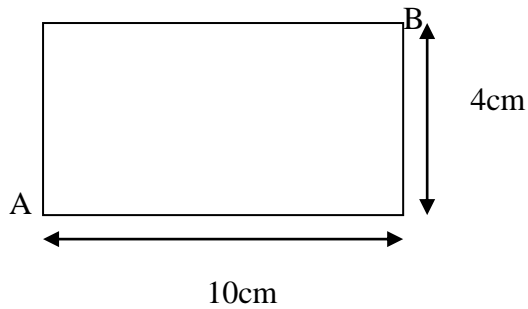**The toppings are: mushroom, pepper, beef, chicken, sausage, onion, prawn and ham.**

27. If the children share the pizzas equally, how may pieces do they each receive?

28. The children asked for 8 different toppings to be put on the pizzas; four on one

　　pizza and four on the other. If Jane chooses a slice of pizza at random, what is the

　　chance that she chooses a slice with onion on?

29. After the meal, the children count up that Bob ate 10 pieces and Mike ate 8. How

　　many slices did Jane eat, if both pizzas were finished?

30. Bob worked out that each pizza slice cost 75p. How much did a pizza cost?

The rectangle is not drawn to scale.

B

4cm

A

10cm

31. How many squares measuring 2cm x 2cm is it possible to fit inside the rectangle?

32. How many lines of symmetry does the rectangle have?

33. What is the perimeter of the rectangle?

34. If a line is drawn from the corner A of the rectangle, to the opposite corner B,

what is the area of one of the triangles formed?

_____

35. A coin is flipped into the air. What is the probability that it will land with its

head-side up?

36. A coin is flipped once and the result H (for head-side up) or T (tail-side up) is

noted. Then the coin is tossed for a second time and again the result noted.

What is the chance of H followed by H?

_____

37. James goes shopping with £10.

He spends £1 on his bus fare and 20p on an ice lolly.

Then James gets his hair cut for £4.60.

James then spends half what he has left on some lunch.

How much money does he now have?

38. David spends £1.99 a week on comics. How much will he spend in one year?

The following table shows the times taken in a 200m race:

Name	Time taken
Sheila	35 seconds
Susan	40 seconds
Sam	58 seconds
Sally	32 seconds
Sasha	63 seconds
Sienna	48 seconds
Sarisha	48 seconds
Sandra	39 seconds

39. Who came 3rd?

40. What was the modal time?

41. Who took just under one minute to complete the race?

42. What was the difference in time between the fastest and the slowest runner?
_____

43. Thursday lies on the last day of May of a certain year. Which is the next month

when Thursday will again lie on the last day?
_____

44. What do all the whole numbers less than 100 add up to?
_____

45. I think of a number. I double it and add 17. The answer is 35. What was my
original number?

46. I think of a two-digit number. I reverse the digits. I divide by 3 and then add 3.
The answer is 10. What was my original number?
_____

Sarah has a bag of marbles.
In the bag there are 6 yellow marbles, 3 blue marbles and 12 green marbles.

47. What is the ratio of green to blue marbles?

48. If Sarah puts her hand in the bag and randomly picks out a marble, what is the
probability that she will choose a yellow marble.

49. Sarah puts the yellow marble to one side, and then picks another marble at
random from the bag. What is the probablilty that she will now choose a green marble?

50. Sarah keeps the yellow and green marble out of the bag. What fraction of the
marbles left in the bag are blue?