

**KINGSTON, SUTTON**  
**11+ Mock paper**

**11+ MATHEMATICS**

**Independent Schools**

**Paper 1**

**45 Minutes**

**100 Marks**

- *You will need a pencil and a ruler.*
- *Calculators are not allowed.*
- *Write your answers in the spaces provided on this paper.*
- *Use any spare space on the page for working out.*
- *Make sure to include units in your answers where necessary.*
- *Try to answer as many questions as you can.*
- *If you cannot do a question, leave it and move on to the next one.*

Work out the answers to the following sums.

1)  $729 \times 39 =$

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2) Divide 2784 by 32

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3) 20 pens cost £4.40. How much do 50 pens cost?

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4) What is the difference between  $31\frac{3}{5}$  and  $24\frac{4}{5}$ ?

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5) A crate holds three boxes. A box holds 5 eggs. How many crates do I need to hold 95 eggs?

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**Turn Over**

6) Sean buys 3 pencils for 35p each and 7 pens for 65p each. If he pays with a £10 note, how much change does he receive?

\_\_\_\_\_

7) Write these numbers in order, from smallest to largest.

0.548

$\frac{1}{3}$

0.34

76%

$\frac{7}{8}$

23%

\_\_\_\_\_

8) Circle the number that cannot be divided by both 7 and 6.

42

504

378

714

422

966

9) John leaves his home at 9.33am and returns at 15:49 on the same day.  
For how long is John away from home?

\_\_\_\_\_ hours \_\_\_\_\_ minutes

10) What is seventeen million three hundred and thirty more than four hundred thousand and seventeen? Write your answer in figures.

\_\_\_\_\_

**Turn Over**

11) I think of any even number, divide it by 2, multiply it by 9 and then subtract 3.  
Underline the correct statement below.

- A The answer is always an odd number.
- B The answer is always an even number.
- C The answer could be odd or even.

12) 6 bananas cost the same as 4 oranges. 3 lemons cost the same as 1 orange. 2 limes cost the same as 1 lemon.

How many limes cost the same as 1 banana?

\_\_\_\_\_

13) Find the missing number in each of the following sequences:

(a) 49, 50, 52, 56, \_\_\_\_\_, 80

(b)  $\frac{1}{3}$ , 1, \_\_\_\_\_, 9, 27, 81

(c) 13:46, \_\_\_\_\_, 14:02, 14:10, 14:18, 14:26

(d) -10, 0, -19, -9, -28, \_\_\_\_\_, -37

(e)  $7\frac{3}{5}$ ,  $8\frac{1}{5}$ ,  $8\frac{4}{5}$ ,  $9\frac{2}{5}$ , \_\_\_\_\_,  $10\frac{3}{5}$

**Turn Over**

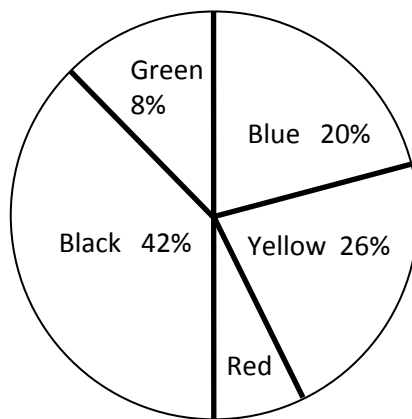
14) The attendance at a football match was 18000, to the nearest 100.

(a) What was the maximum possible attendance? \_\_\_\_\_

(b) What was the minimum possible attendance? \_\_\_\_\_

(c) What is the range of your answers to (a) and (b)?  
\_\_\_\_\_

15) A group of people chose their favourite colour.  
The results are shown on the chart below.



If 126 people chose Black, how many people chose Red?

\_\_\_\_\_

**Turn Over**

16) If it takes 10 people half an hour to build a wall:

(a) How long will 5 people take to build the wall? \_\_\_\_\_

(b) How long will 30 people take to build the wall? \_\_\_\_\_

17) Ben goes to a restaurant. There are two choices for starter, three choices for main and one choice for dessert.

If Ben wants 1 starter, 1 main and 1 dessert, how many different combinations are possible?

\_\_\_\_\_

18) 11 students took a test at school. The average score was 32.

(a) How many marks were scored in total?

\_\_\_\_\_

Another class of 11 students took the same test and scored an average of 28.

(b) What was the average score of all the students in the two classes?

\_\_\_\_\_

**Turn Over**

19) Calculate the value of  $x$  in the following equations.

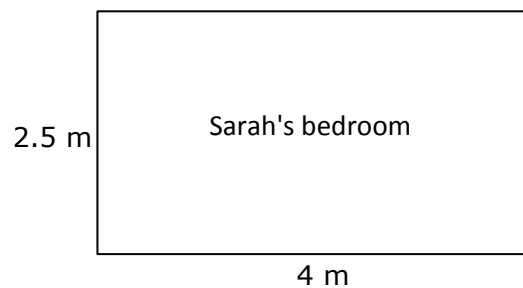
(a)  $7x + 15 = 43$

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(b)  $9x - 3x = 54$

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20) Sarah wants to place new floorboards in her bedroom. Each floorboard measures 10 cm by 80 cm. The dimensions of the bedroom are shown in the diagram below.



How many floorboards does Sarah need to cover her entire bedroom floor?

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**Turn Over**

21) The notation  $5!$  is used to mean  $5 \times 4 \times 3 \times 2 \times 1$   
So  $5! = 120$   
 $4! = 4 \times 3 \times 2 \times 1 = 24$

Calculate the following:

(a)  $6! =$

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(b)  $8! - 3! =$

---

(c)  $56! \div 54! =$

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22) Three coordinates on a graph are  $(3, 8)$ ,  $(1, 2)$  and  $(3, 2)$ . They are named A, B and C respectively.

Write down the coordinates of a fourth point, D, such that ACBD forms a rectangle.

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**Turn Over**



23) If July 24th is a Tuesday, on what date is the second Tuesday in August?

\_\_\_\_\_

24) What is the Highest Common Factor of 24, 48 and 16?

\_\_\_\_\_

25) Peter faces South-West. He then turns  $270^\circ$  anti-clockwise. In what direction does he now face?

\_\_\_\_\_

26) Estimate the answer to the following expression. Write your answer to the nearest whole number.

$$(\sqrt{36}) \times 7.012$$

\_\_\_\_\_

**Turn Over**

27) How many different three-digit numbers can be made that include all three of the digits 4, 5 and 7?

\_\_\_\_\_

28) There are 17 flowers in a field. 14 of them have blue petals. If 10 of the flowers have long stems then what is the least possible number of flowers that have blue petals and long stems?

\_\_\_\_\_

29)

London	14:34	14:52	15:14
Porchester	14:45	---	15:27
Grantchester	15:01	15:24	---
Banchester	15:16	15:45	16:01

Use this train time-table to help you answer the questions below.

(a) If I take the 15:27 train from Porchester, how long will it take me to arrive in Banchester?

\_\_\_\_\_ minutes

(b) I wish to travel from London to Porchester on the first available train. I arrive at the London station at 14:45. After how many minutes will I arrive in Porchester?

\_\_\_\_\_ minutes

**Turn Over**

30) Two angles in a triangle are  $54^\circ$  and  $78^\circ$ , what is the third angle?

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31) Put the following numbers into the magic square below so that each row, column and diagonal adds up to zero.

4 3 2 1 0 -1 -2 -3 -4


32) 3 oranges and 2 apples cost £2.55.  
2 oranges and 1 apple cost £1.55.

What is the total cost of 1 orange and 1 apple?

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**Turn Over**

33) Answer the questions below using the numbers in the box.

41	49	27
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(a) Subtract the square number from the prime number.

\_\_\_\_\_

(b) Multiply the prime number by the cube number.

\_\_\_\_\_

34) John plays a game in which each letter in the alphabet is worth a different whole number of points. The minimum value of a letter is 1 point. The points are added up to find the value of a word.

The value of the word SEE is 4.

The value of the word SEA is 6.

The value of the word SEAL is 10.

Using this information, what is the value of the word SEALS?

\_\_\_\_\_

35) There are four hundred and fifty-three students in a school. They each have two hundred pounds.

How much money do they have altogether?

\_\_\_\_\_

**NOW GO BACK AND CHECK ALL YOUR ANSWERS**