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Founded 1515

ENTRANCE EXAMINATION 2008

PART 1 ARITHMETIC EXAMINATION

Time available: 50 minutes

Surname: ....

First Name(s): ....

School: ....

There are 40 questions in this paper and each question is worth one mark. Work through the questions in the order in which they appear. The questions toward the end of the paper are not necessarily the most difficult. Do attempt the questions on every page.

All answers must be written clearly in the answer-spaces provided. If an answer cannot be read easily it may be marked wrong.

Instead of leaving blank answer-spaces, you should use any available time at the end of the examination to make the best attempt you can at questions you have not done.

You may use rough paper; this will not be marked.

Calculators must not be used.

	Marker 1	Marker 2
Total number of ticks		
Total number of crosses		
	Check total is 40 and initial here	Check total is 40 and initial here

1   Write out in figures the number thirty thousand and twenty four.

1 _____

2   Work out 36 x 25.

2 _____

3   What is the difference between 3 x 3 x 3 x 3 and 4 x 4 x 4 ?

3 _____

4   Stephen bought a toy for £4.24 and received four coins in change from a £5 note. What were the coins?

4 _____

5   In a test Rodger scored 12 marks. His percentage score was 25%. How many marks was the test marked out of?

5 _____

6   Work out 347 + 256 – 101.

6 _____

7   Add up the prime numbers between 20 and 30.

7 _____

8   What is the first number in this sequence which is greater than 50?

          3, 4, 6, 9, 13, ….?

8 _____

9   Aidan divides a line 42 centimetres long into three sections. The first section is twice as long as the middle section which is twice as long as the last section. How long is the middle section?

9 _____ cm

10   A rectangle of width 50 cm has an area of 2 square metres. What is the length of the rectangle, in centimetres?

10 _____ cm

PLEASE TURN OVER

11 Work out 4·7 + 3·52.

11

12 Work out 7·2 − 3·95.

12

13 Multiply 3·4 by 1·2.

13

14 Divide 4·2 by 0·2.

14

15 Andrew earns £35 000 in a year. He gives 1% of his money to charity. How much does he have left?

15 £

16 In a triangle, two of the angles are equal and the third is twice as big as each of the other two. What is the largest angle?

16

17 What is the largest number that is a factor of both 48 and 64?

17

18 In this magic square, every row, column, and diagonal has to add up to 15. What number will be in the square labelled A?

18

	5	7
8	A	

19 What is the remainder when I divide 4 798 by 11?

19

20 Wyn and Godfrey's ages add up to 10. In ten years time Wyn will be one and a half times as old as Godfrey.
How old is Godfrey now?

20

PLEASE TURN OVER

Answers to questions 21 to 25 must be written as fractions in their simplest form.
For example, $\frac{2}{3}$ is simpler than $\frac{4}{6}$, $1\frac{3}{7}$ is simpler than $\frac{10}{7}$ and 6 is simpler than $\frac{6}{1}$.

21   Work out $2\frac{3}{5} + 4\frac{9}{10}$.

<div style="text-align:right">**21** ⬚</div>

22   Work out $4 - 1\frac{7}{12}$.

<div style="text-align:right">**22** ⬚</div>

23   Work out $3\frac{1}{10} \times 5$.

<div style="text-align:right">**23** ⬚</div>
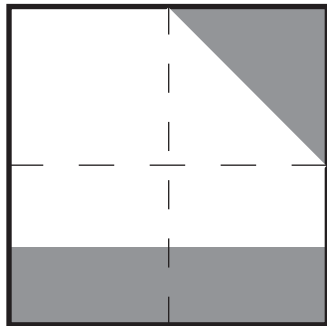
24   Work out $27\frac{1}{2} \div 11$.

<div style="text-align:right">**24** ⬚</div>

25   David has a square piece of card. He cuts off the areas which
are shaded, as shown in this diagram. What fraction of the
original area is now remaining?

<div style="text-align:right">**25** ⬚</div>

26   What is the angle between the hands of a clock at five o'clock?

<div style="text-align:right">**26** ⬚</div>
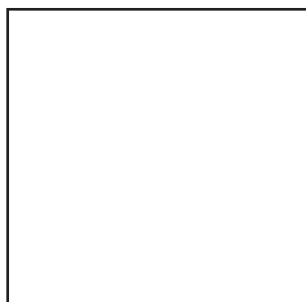
27   What is $\frac{1}{2}$ of $\frac{1}{3}$ of $\frac{1}{4}$?

<div style="text-align:right">**27** ⬚</div>

28   Irfan bends a piece of wire into a square. The area of the
square is 64 square centimetres. How long is the wire?

<div style="text-align:right">**28** ⬚ cm</div>

29   Neil spends $\frac{1}{3}$ of his money. He then spends $\frac{1}{3}$ of what he has
left. What fraction of his money did he spend altogether?

<div style="text-align:right">**29** ⬚</div>

30. Geraint spent 46 pence on sweets which cost either 5 pence or
7 pence each. How many sweets did he buy altogether?

<div style="text-align:right">**30** ⬚</div>

PLEASE TURN OVER

31 Add together 3 metres, 3 centimetres and 3 millimetres. Give your answer in millimetres.

31 [   ] mm

32 Nigel drives at a steady speed of 80 kilometres per hour for five hours. Tim does the same journey at a steady speed of 50 kilometres per hour. How long does it take Tim to complete the journey?

32 [   ] hrs

33 What is the difference between the difference between 8 and 5 and the difference between 11 and 21?

33 [   ]

34 In a sale, prices have been reduced by 30%. Irfan buys a carpet which is priced at £280 in the sale. What was the original price of the carpet?

34 £ [   ]

35 If I join every cross in the pattern to every other cross how many lines will I draw?

35 [   ]

x

x   x

x   x

36 A cuboid is 3 centimetres long, 2 centimetres wide and 1 centimetre high. What is the total area of all the faces?

36 [   ] cm²

37 How many different four-digit numbers can be made by using the digits 1, 1, 2 and 3?

37 [   ]

38 In a certain year, March 1st fell on a Saturday. What was the next month which started on a Saturday?

38 [   ]

39 The average temperature in Manchester last week over the five days from Monday to Friday was 14 °C. On Monday the temperature was 18 °C and on Tuesday it was 16 °C. What was the average temperature on the other three days?

39 [   ]

40 2 oranges and 3 lemons cost 64 pence. 3 oranges and 4 lemons cost 89 pence. What is the cost of an orange?

40 [   ] p

END OF EXAMINATION
USE ANY REMAINING TIME TO CHECK YOUR WORK
OR TRY ANY QUESTIONS YOU HAVE NOT ANSWERED.