Name	
Current School	

Mathematics

Entrance exam for: 11+/13+ (Sample)

Time allowed: 45 minutes

Total marks: 50

Please read this information before the examination starts

- Answer **all** questions
- Please write your solutions on the question paper and, where relevant, in the designated space.
- You may **not** use a calculator.

Section A (20 marks)
Section A is designed to test core skills and understanding. All questions in Section A are worth 1 mark.

Section B (30 marks)
Section B contains a greater element of problem solving. It contains a mixture of multiple choice and written answer questions. You should complete the written answer questions in the space provided and you will be marked on the presentation of your written work in addition to your final solution; answers without supporting work/calculations may not score full marks.

For office use only

Marks awarded:	

Comments:	

Section A

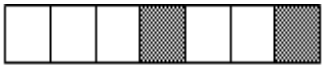
All questions are worth 1 mark

Write your answers down the right-hand side

		Answer
1	Calculate 12×12.	
2	What is the value of the digit 5 in the number 82539?	
3	How many metres is 5600 mm?	
4	How many faces does a triangular based pyramid have?	

5	Calculate $96 \div 8$.	
6	At the bakers, iced buns cost 80p and cinnamon rolls cost £1.10. How much do 2 iced buns and 1 cinnamon roll cost?	
7	A netball match starts at 10.20 am. It has 4 quarters lasting 12 minutes each and there is a break of 4 minutes between each quarter. At what time does it end?	
8	Calculate $15 - 3 \times 4$	
9	Calculate $100 - 17$	

10	Calculate $(-4)^2$	
11	Calculate $0.034 + 5.62$	
12	Calculate $\frac{2}{3} + \frac{1}{6}$	
13	Solve $x + 7 = 11$	
14	Solve $5x - 2 = 1$	

15	What fraction of the strip is not shaded? 	
16	Write 0.6 as a fraction in its simplest terms.	
17	What temperature is $28°C$ less than $10°C$?	
18	5 cm on a map represents 2 km on the ground. What is the distance on the ground of two villages what are 15 cm apart on the map?	
19	What is the area of a triangle with base 10 cm and height 6 cm?	

20	I think of a number, add 3, multiply by 5 and subtract 27. The result is 28. What number did I start with?	

Section B

Each of these multiple choice questions is worth 2 marks.

If you give an incorrect answer you will be **deducted** 1 mark.

Write your answer by putting the relevant letter on the right hand side.

		Answer
1	Which of the following has the same remainder when it is divided by 2 as when it is divided by 3? A: 3 B: 5 C: 7 D: 9 E: 11	
2	Which of the following numbers is closest to 1? A: 0.088 B: 0.72 C: 1.3 D: 0.0093 E: 1.21	
3	The difference between $\frac{1}{3}$ of a certain number and $\frac{1}{4}$ of the same number is 3. What is the number? A: 24 B: 36 C: 48 D: 60 E: 72	

4	In the expression $1 \boxdot 2 \boxdot 3 \boxdot 4$, each $\boxdot$ is to be replaced by either $+$ or $\times$. What is the largest value of all the expressions that can be obtained this way? A: 10 B: 14 C: 15 D: 24 E: 25	
5	Which of the following is divisible by all of the integers from 1 to 10 inclusive? A: 23×24 B: 34×45 C: 45×56 D: 56×67 E: 67×78	

For the following questions you should show all of your working clearly.

Correct answers without working may not receive full marks.

6 Jess's scores on her maths tests are 7, 11, 10, 2, 12 and 6. What is her mean (average) score? **[3]**

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7 Calculate $5\frac{5}{6} - 2\frac{11}{12}$ giving your answer as a mixed number. **[3]**

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8 A man cycles uphill for 6 km at 6 km/h. **[3]**
He then cycles along 18 km of flat at 12 km/h.
Finally, he heads downhill for 20 km at 15 km/h.

Find the time taken for the whole journey, give your answer in hours and minutes.
Hint: $Speed = \frac{Distance}{Time}$

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9 When painting the lounge, I used half a 3 litre can to complete the first coat of paint. I then used two thirds of what was left to complete the second coat. **[3]**

How much paint was left after both coats were complete?

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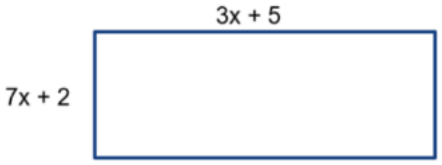
10 (a) Write an expression for the perimeter of the rectangle below. **[2]**



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The perimeter of the rectangle is measured as 34 m. **[3]**

(b) Find the area of the rectangle.

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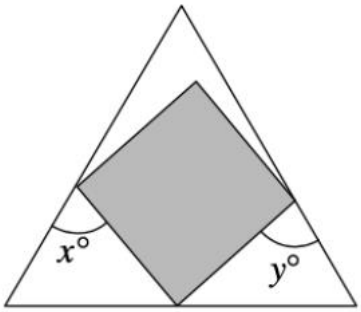
11 The diagram shows a square inside an equilateral triangle. What is the value of $x + y$? **[3]**



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End of Exam