STREATHAM & CLAPHAM HIGH SCHOOL

MATHEMATICS SPECIMEN PAPER FOR 11+ ENTRY

Name:.....

Mathematics Examination Paper

Time Allowed: 1 hour

Specimen Paper

Section A: 35 minutes

Section B: 25 minutes

Circle the correct answer for each question on the question paper itself.

Space has been provided for working-out for each question. If you need extra paper, please put your hand up.

Section A

Circle the Correct Answer

1. Work out the following sum

$$\begin{array}{r} 13\ 8\ 4 \\ +\quad 6\ 4\ 2 \\ \hline \\ \hline \end{array}$$

A	1026	B	2006	C	2026	D	226	E	1926

2. Work out 361 x 13.

A	1344	B	833	C	1703	D	4693	E	1444

3. Calculate the area of the rectangle.



A	80cm^2	B	106cm^2	C	86cm^2	D	96cm^2	E	48cm^2

4. Find 30% of 120

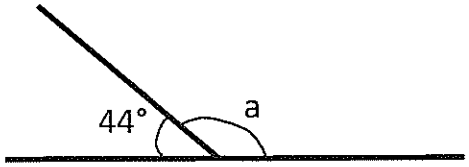
A	30	B	3.6	C	36	D	40	E	64

5. Which of the following numbers has the largest value?

0.0073 0.073 0.008 0.7098 0.7

A	0.0073	B	0.073	C	0.008	D	0.7098	E	0.7

6. Calculate the angle marked with the letter a.



A	126°	B	46°	C	316°	D	136°	E	36°

7. What is the missing number?

560 ÷ ☐ = 8

A	7	B	70	C	700	D	0.7	E	0.007

8. Change 0.76 to a fraction in its simplest form.

A	$\frac{19}{25}$	B	$\frac{38}{50}$	C	$\frac{76}{100}$	D	$\frac{3}{4}$	E	$\frac{1}{4}$

9. The local bakery sells muffins at 85p each. I have £15 to spend. How many muffins can I buy?

A	17	B	16	C	15	D	14	E	20

10. How many lines of symmetry does a rectangle have?

	0	B	1	C	2	D	3	E	4

11. What is two-fifths of 45?

A	9	B	18	C	27	D	5	E	10

12. Find the value of 59.9 ÷ 28.6

A	88.15	B	87.5	C	77.5	D	88.5	E	77.15

13. The area of the parallelogram is $38cm^2$. Find the length of its base.



A	9.5cm	B	8.5cm	C	7.5cm	D	7.25cm	E	9.25cm

14. Convert 340 millimetres to metres.

A	3.4m	B	0.34m	C	34m	D	0.034m	E	0.0034m

15. In six of her end of term tests, each out of 50 marks, Madiha scores 48 in Mathematics, 37 in Physics, 40 in English, 48 in Chemistry, 36 in Biology and 31 in Geography.

a) What is the mode of Madiha's six scores?

A	48	B	37	C	30	D	31	E	40

15 b) Calculate her mean average score.

A	36	B	37	C	38	D	39	E	40

16. a) 13, 9, 5, 1, -3, ...

What are the next two numbers in the sequence?

A	-1, -5	B	-6, -9	C	-8, - 12	D	-7, -11	E	0, -4

16. b) What is the rule of the above sequence?

A	4n - 17	B	17 – 4n	C	-7n + 13	D	5 – 3n	E	9n + 4

17. I think of a number, multiply by 2 and add 5. The answer is 19. What was the number?

A	6	B	8	C	7	D	48	E	28

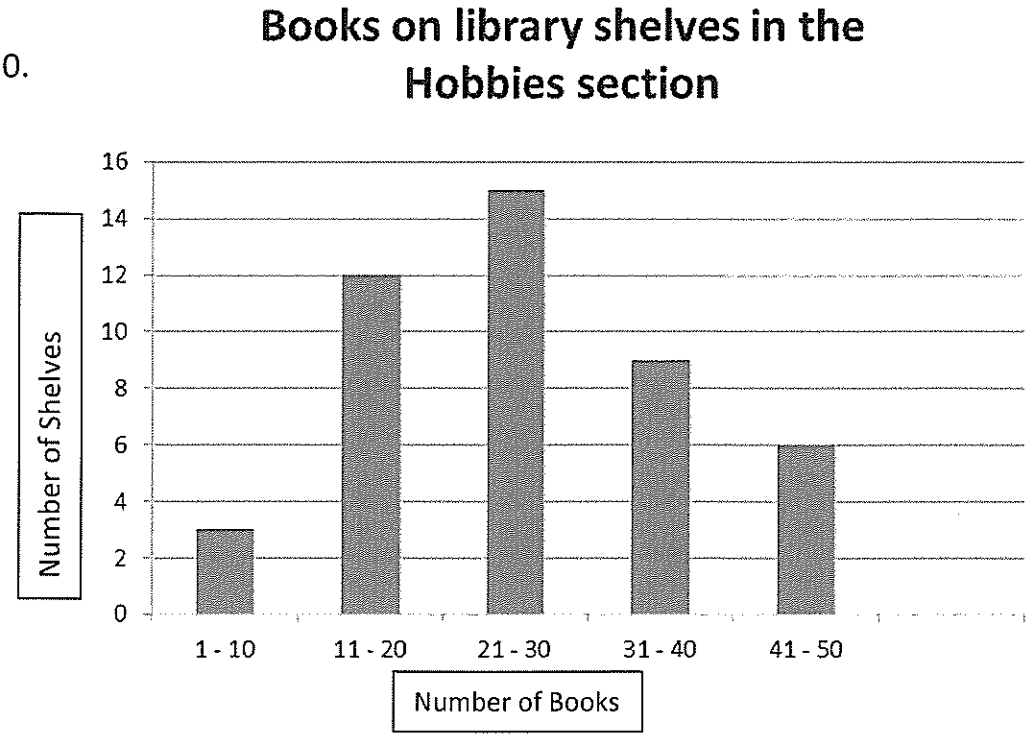
18. Pens cost 35p each. How much money will a box of 25 pens cost?

A	£8.40	B	£8.75	C	£87.50	D	£865.00	E	£9.25

19. I leave home at 7.35am and it takes me 42 minutes to get to school. What time do I get to school?

A	8.17am	B	08:16	C	18:07	D	18:17	E	8.07am

20.



a) How many shelves have more than 30 books?

A	15	B	14	C	30	D	16	E	21

20. b) How many shelves are there in the Hobbies section altogether?

A	37	B	5	C	45	D	47	E	52

21. How many prime numbers are there between 20 and 30?

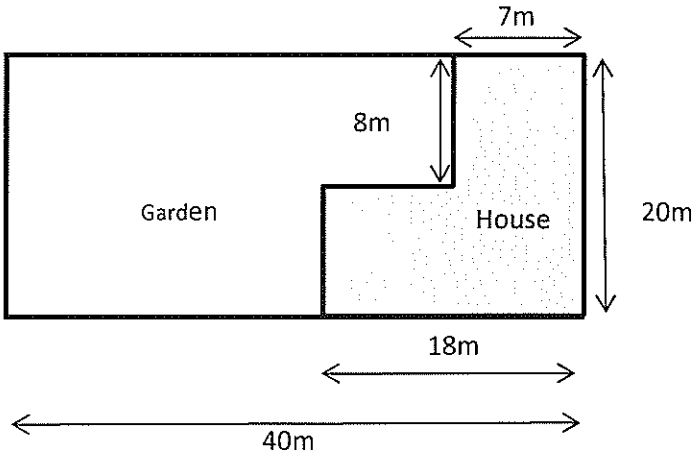
A	0	B	1	C	2	D	3	E	4

22. There is a sale at the local mobile phone shop. Alex wants to buy a new phone which originally cost £150. The prices of all the phones have been reduced by 20%.

What amount will Alex have to pay for his new phone?

A	135.00	B	£149.70	C	£147.00	D	£130.00	E	£120.00

23. This is a plan of a house and its garden:



a) Find the area of the house.

A	416 m^2	B	196 m^2	C	272 m^2	D	360 m^2	E	320 m^2

23. b) Find the area of the garden.

A	384 m^2	B	528 m^2	C	480 m^2	D	604 m^2	E	440 m^2

24. A bag of Fruit Pastilles has 15 red, 20 orange, 12 yellow and 13 black sweets. You choose a sweet from the bag without looking inside.

a) What is the probability that the sweet you choose will be an orange sweet?

A	⅓	B	1/6	C	5/6	D	4/5	E	⅕

24 b) What is the probability that it is not a yellow sweet?

A	⅓	B	1/6	C	5/6	D	4/5	E	⅕

25. $4d + 7e - d + 2e =$

A	$3d - 9e$	B	$12de$	C	$4d - 9e$	D	$3d + 9e$	E	$5d - 9e$

26. $3.2 \times 2.6 =$

A	8.32	B	6.12	C	9.12	D	6.32	E	5.12

27. Write three-fifths as a percentage.

A	6%	B	30%	C	35%	D	3%	E	60%

28. 6.05 ÷ 5

A	12.1	B	1.21	C	21	D	1.1	E	1.05

29. C = 5W + 10A

Work out the value of C when W = 3 and A = -1

A	14	B	45	C	5	D	25	E	17

30.

$$\frac{2}{5} + \frac{3}{5} - \frac{1}{10} =$$

A	$\frac{6}{5}$	B	$\frac{9}{10}$	C	$\frac{4}{10}$	D	$\frac{3}{10}$	E	$\frac{4}{5}$

End of Section A

Section B

9	A	
	10	
13	B	

This is a magic square.
All the columns, rows and diagonals add up to 30.
Several numbers have been missed out.

1. What number replaces B?

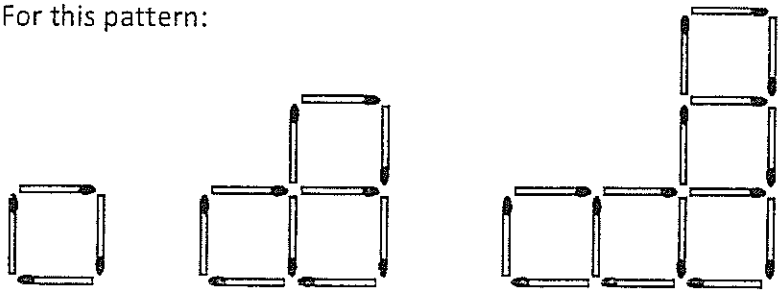
A	6	B	8	C	7	D	5	E	10

2. What number replaces A?

F	12	G	13	H	14	J	15	K	16

A number of shapes have been made with matches.

For this pattern:



3. How many matches will be in the 4th shape?

L	26	M	18	N	24	P	20	Q	22

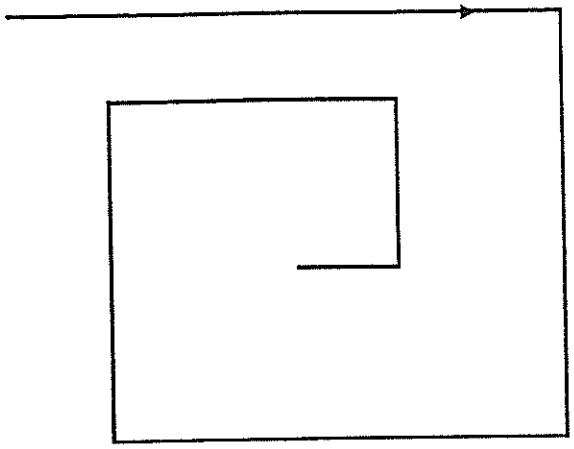
4.

Pattern number	1	2	5
Number of matches	4	10	x

For the above pattern, what is 'x' in this table.

R	24	S	26	T	32	U	30	V	28

The diagram shows Anthony the ant setting off for a walk in search of food. On this journey Anthony walked a certain distance, and turned right. Each time he turned right he walked 2 metres less than he did the time before .



5. On the last part of his journey before stopping he walked one metre. How far did he walk altogether?

A	38	B	14	C	51	D	45	E	49

6. When my age is divided by 2, 3, 4 or 6 there is always a remainder of 1. But when dividedby 7 there is no remainder. How old am I?

F	14	G	49	H	7	J	21	K	35

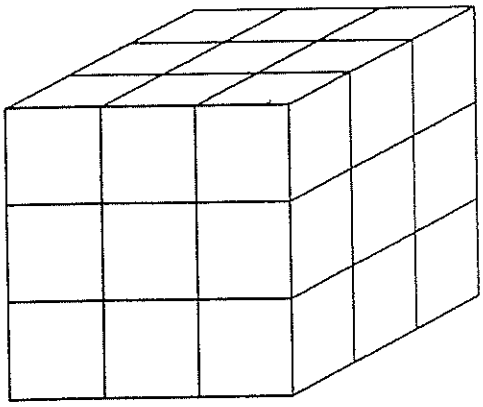
7. Find two numbers which when multiplied together make a hundred. Neither of the two numbers can have the digit zero.

L	33, 67	M	29, 17	N	25, 4	P	50, 2	Q	11, 9

8. Find two numbers which when multiplied together make a thousand. Once again, neither of the two numbers can have the digit zero in them.

R	100, 10	S	47, 53	T	125, 8	U	99, 111	V	25, 14

A cube with sides 3 cm is made from smaller cubes of side 1 cm as shown.



9. How many small cubes are used in making the bigger cube?

A	21	B	27	C	9	D	18	E	30

10. If the bigger cube is painted red all over, how many small cubes will have three red faces?

F	27	G	8	H	30	J	15	K	19

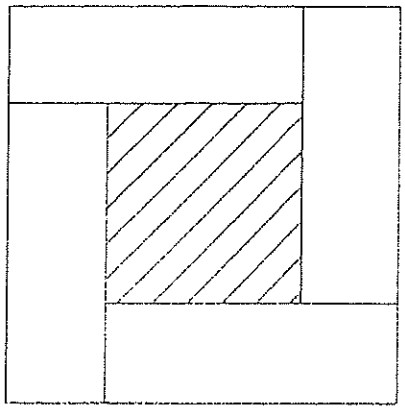
11. How many small cubes share a face with exactly 5 other small cubes?

L	0	M	2	N	3	P	6	Q	8

12. How many small cubes share a face with exactly 2 other small cubes?

R	2	S	1	T	0	U	3	V	4

Four rectangles each of length 14 cm and width 6 cm are arranged to form the square shape shown below (the diagram is not drawn to scale).



Find:

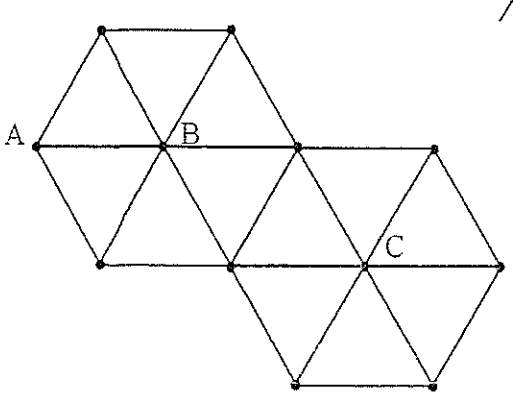
13. The perimeter of this outer square shape

A	90cm	B	27cm	C	80cm	D	20cm	E	40cm

14. The area of the shaded inner square.

F	$16cm^2$	G	$64cm^2$	H	$32cm^2$	J	$48cm^2$	K	$20cm^2$

In the diagram below, routes may only be made between dots by travelling along lines.
You may only travel in directions ↗ or ↘ or →



So there are three routes from A to B.

15. How many routes are there from B to C?

L	4	M	5	N	3	P	2	Q	6

16. How many routes are there from A to C, via B?

R	15	S	12	T	18	U	7	V	8

End of Section B