CSSE Mock Paper 3 Maths

First Name: .....

Last Name: .....

Primary School: .....

Date of Birth: .....

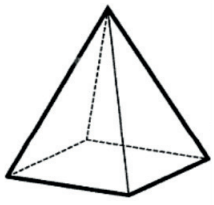
Today's Date: .....

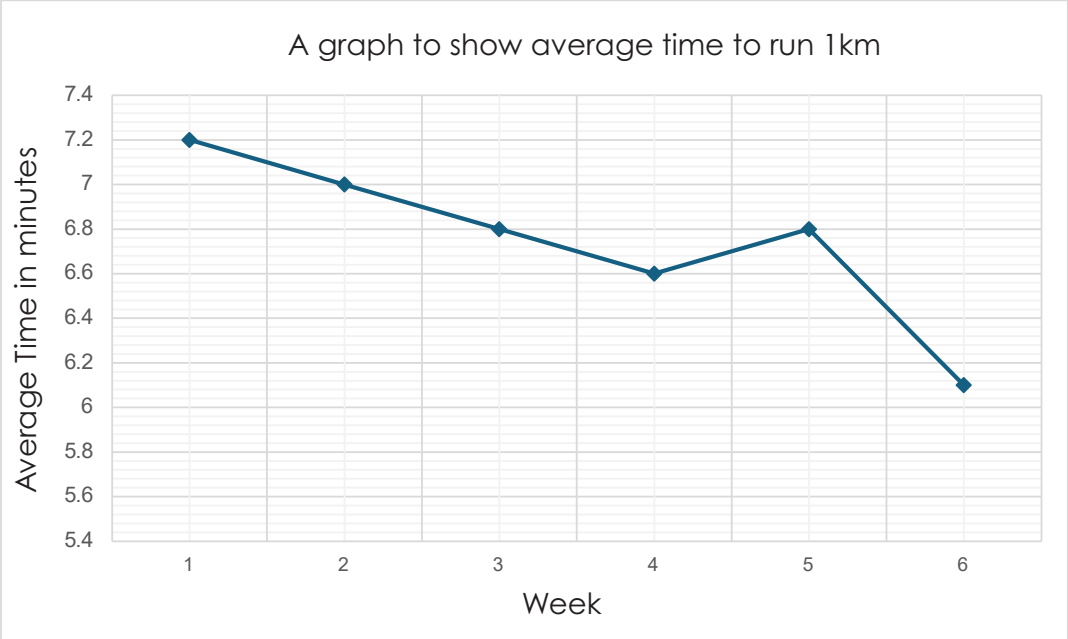
DO NOT OPEN THIS PAPER UNTIL INSTRUCTED TO DO SO.

11 Plus Essex CSSE – Maths

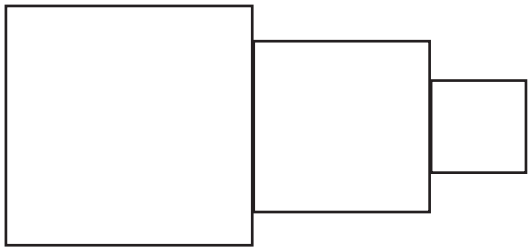
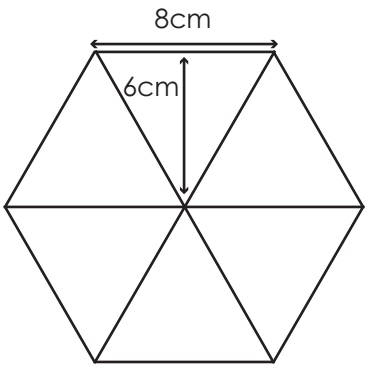
Read the instructions carefully.

1. Do not open this booklet until you are told to do so.
2. You may work the questions out in your head, or by working out on the white area around the question.
3. Work as quickly and carefully as you can.
4. Make any alterations to your answers **clearly**. You will not lose marks for crossing out.
5. You will have **60 minutes** to do this test. If you find you cannot do a question, do not waste time on it, but go on to the next one.
6. Once the test has begun, you should not ask about questions in the test.
7. The use of electronic calculators of any description (including calculator watches) is **NOT** permitted.

Question (and working space)	ANSWER
In the questions below, fill in the box to make the calculations correct.	
1. **(a)** $(26 \times 3) + \square = 60 \div 0.6$	Fill in the box
(b) $\frac{5}{6} + \frac{2}{3} = \square$	Fill in the box
(c) $9{,}021 - \square = 8{,}645$	Fill in the box
(d) $\frac{1}{2} + \frac{2}{8} + \frac{3}{16} = \square$	Fill in the box
(e) $(12 \times 9) \div (\square \times 3) = 6$	Fill in the box
2. The diagram shows a square-based pyramid.  How many edges does the pyramid have?	

Question (and working space)	ANSWER
3. What is the product of 12 and 8.5?	
4. A headteacher is arranging for the children to go to the theatre. They will hire minibuses to take the children to the theatre. Each bus takes 16 children. There are 150 children in total. How many buses will the school need to take all the children to the theatre?	
5. Calculate 23.6 + 14.9 =	
6. Jack thinks of a number. When he multiplies it by 17, he gets 153. What was the original number?	
7. Use the graph below to answer the following questions.  	
(a) What was the average running time in week 4?	..... minutes

Question (and working space)		ANSWER
(b)	How many weeks had an average time less than 6.7 minutes?	..... weeks
(c)	The graph shows a trend of the average running time decreasing each week. Which week is this not the case?	
(d)	Which two weeks had the same average running time?	
(e)	What is the difference in average time from week 1 to week 6?	..... minutes
8.	Work out the original numbers.	
(a)	Layla thinks of a number. When she subtracts 28 from it, she gets 65. What was the original number?	
(b)	Amir thinks of a number. When he divides it by 6, he gets 14. What was the original number?	
(c)	Sofia thinks of a number. She multiplies it by 4, then adds 19. Her final answer is 75. What was the original number?	
9.	$(4X)^3 = 512$ What is the value of X?	
10.	Jane is watching birds play in her garden. She noted that 3 out of 7 were pigeons. She recorded 42 birds in total. How many birds were not pigeons?	

Question (and working space)	ANSWER
11. A square of area 49cm², a square of perimeter 20cm and a square of area 9cm² are positioned next to each other, as shown below.  What is the perimeter of the new shape formed?	.....cm
12. What number is 7 less than half of 7 million?	
13. What is the product of the first three prime numbers?	
14. The hexagon is made up of 6 identical triangles.  What is the area of the hexagon?	.....cm²

Question (and working space)	ANSWER
15. It takes 900cm³ of fuel to travel 15km.	
(a) How far can the car travel on 3,000cm³ of petrol?	..... km
(b) How much fuel in litres is needed to travel 90km?	..... litres
16. In a number square, each row, column and diagonal must add up to the same total. Identify the number that should be in place of the question mark.	
(a)	
(b)	

(a)

13	6	11
8		
9		?

(b)

11		
6	?	10
7		5

Question (and working space)	ANSWER

17. A and B are whole numbers.
A rounded to the nearest 10 gives 470.
B rounded to the nearest 10 gives 260.

(a) What is the largest possible value of A?

(b) What is the smallest possible value of B?

(c) What is the largest possible value of A + B?

(d) What is the smallest possible value of A − B?

18. This is a coach timetable.

Explore Coaches – Daily Timetable (Monday – Friday)

	Coach A	Coach B	Coach C	Coach D
Parkside	08:15	09:30	10:45	11:05
Riverview	08:45	10:00	11:15	11:37
Hilltop	09:10	10:30	11:40	12:15
Market Square	09:45	11:05	12:20	12:56

(a) Liam wants to travel from Riverview to Market Square in the shortest possible time. Which coach should he take?

Question (and working space)		ANSWER
(b)	If Coach D is delayed at Parkside by 7 minutes and delayed at Riverview by a further 6 minutes, what time will it arrive at Hilltop?	
(c)	How long does Coach C take to travel from Parkside to Market Square?	
19.	Amira completes a spelling test once a week. Her average score over 5 weeks is 16.	
(a)	What is the total of all her scores from the 5 weeks?	
(b)	In week 6, she scores 10. What is her new average score over 6 weeks?	
(c)	If Amira wants her average after 7 weeks to be 17, what must she score in Week 7?	

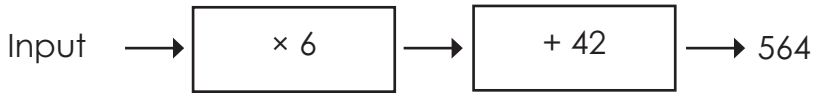
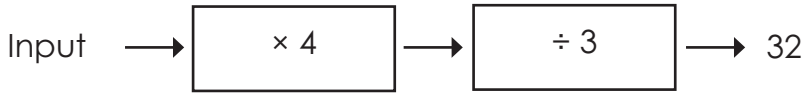
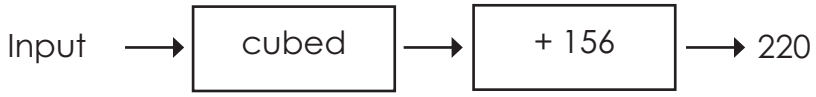
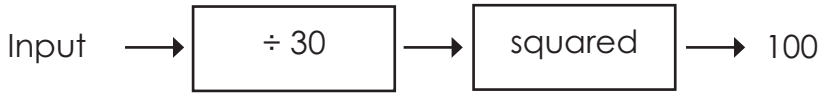
Question (and working space)	ANSWER
20. A scale drawing uses the scale 1cm = 10m. A wall is 3.5cm long on the drawing. What is its real length?	.....m
21. A right-angled triangle has one angle of 90° and another of 40°. What is the third angle?	.....°
22. A jug holds 2.5 litres of juice. 500ml of juice is poured into a glass. How many millilitres of juice are left in the jug?	.....ml
23. A square has an area of 81cm². What is the length of one side in mm?	.....mm
24. A car travels 135m in 3 hours. What is its average speed in miles per hour?	.....mph

25. A teacher recorded the results of 9 children in a maths test. The test was out of 20 marks.

Child 1	Child 2	Child 3	Child 4	Child 5	Child 6	Child 7	Child 8	Child 9
8	11	7	16	3	10	13	8	5

(a)	What is the average result for the maths test?	
(b)	What is the range of scores?	

Question (and working space)	ANSWER
26. A security key pad displays these digits: | 2 | 4 | | 6 | 8 | A two digit code is created using any two of these digits. For example, 24 or 82.	
(a) How many codes are possible if the same digit can be used twice?	
(b) How many codes are possible if the same digit cannot be used twice?	
(c) Another security key pad has this screen: | A | B | C | | 2 | 3 | 4 | | 5 | 6 | 7 | If a code on this screen requires a letter followed by a single digit number, how many codes are possible?	
27. Fahima has twenty-seven 50 pence pieces. How many 10-pence pieces does Fahima need to increase her money to £15?	
28. Five bakers each baked a tray of cupcakes. Their baking times in minutes (m) and / or seconds (s) are shown in the table below. | Baker 1 | Baker 2 | Baker 3 | Baker 4 | Baker 5 | | 1.5 m | 1 m 47 s | 109 s | 1 m 36 s | 1.25 m | Who bakes their cupcakes the fastest?	

Question (and working space)	ANSWER
29. Complete the input machines.	
(a) 	Input = ...
(b) 	Input = ...
(c) 	Input = ...
(d) 	Input = ...
30. What is 247,657 rounded to the nearest 100?	
31. A plane arrived at its destination at 16:34 after a flight time of 5 hours and 45 minutes. At what time did the plane start its journey?	
32. What number must replace the question mark to make the statement true? 40 ×? = 30	

Question (and working space)		ANSWER
33.	10 friends share 5 pizzas between them. If each pizza is cut into 6 pieces, how many pieces does each friend receieve?	
34.	What number comes next in the sequence? 4, 6, 10, 18, 34, ?	
35.	If ⅗ of a number is equal to 24, what is half of the number?	

END OF TEST

Working Out Space

Working Out Space

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