

Do not turn over or open this booklet until told to do so

CEA

Common Entrance Assessment

Paper 2

Saturday 26 November 2011

Time: 1 Hour

Please fill in the following from your admission card:

Your Candidate Number _____

Your Assessment Centre _____

Your Date of Birth _____

Answer all 58 questions in this booklet

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IN BY THE PUPIL

MATHEMATICS

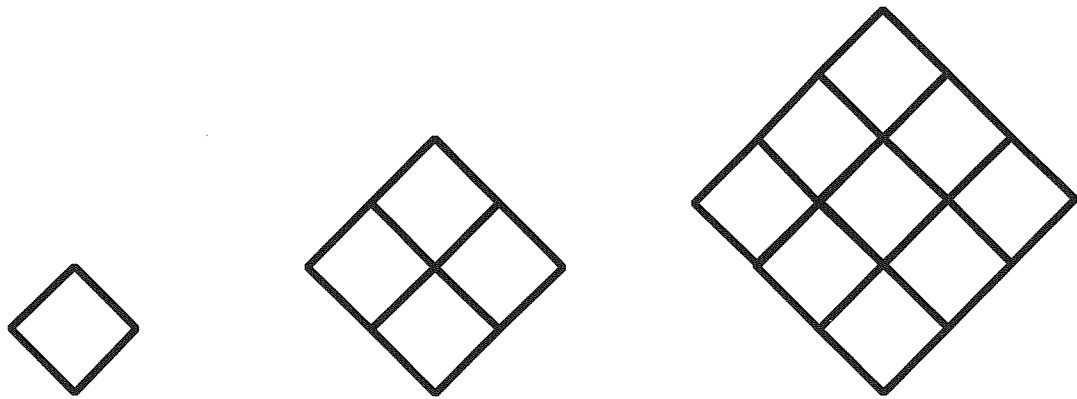
Page	Marks	Score	Check
1	(2)		
2	(5)		
3	(1)		
7	(4)		
8	(4)		
12	(4)		
13	(4)		
17	(2)		
18	(3)		
19	(3)		
TOTAL 32			

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IN BY THE PUPIL

ENGLISH

Page	Marks	Score	Check
4	(1)		
5	(5)		
6	(4)		
9	(1)		
10	(3)		
11	(1)		
15	(5)		
16	(4)		
21	(5)		
22	(3)		
TOTAL 32			
TOTAL SCORE			

1. Look at the **sequence of 3 patterns** below. Each pattern is **made up of small squares**.



Pattern 1

Pattern 2

Pattern 3

Look at the **table below**. It shows the number of small squares in each pattern.

Pattern	1	2	3
Small squares	1	4	9

How many small squares are needed to make **Pattern 6**?
Write your answer in the space below.

_____ small squares

2. Sharon has a **1400 g** bag of sugar. It contains **380 spoonfuls** of sugar. She wants to calculate **how many grammes** of sugar a **spoonful** holds. Look at the **four calculations below**. Tick the calculation Sharon must do to calculate how many grammes of sugar a spoonful holds.

$380 \div 1400$

$1400 \div 380$

1400×380

$1400 + 380$

Do not write in this column

3. Look at the calculation below. **Complete** the calculation by **writing a number** in each of the **two boxes** below.

$$\begin{array}{r}
 233 \\
 + 3\ \square\ 4 \\
 \hline
 \square\ 1\ 7
 \end{array}$$

4. Look at the **seven numbers** below. **Circle** the number that is a **prime number**.

33 49 64 16 15 99 23

5. Look at the **seven numbers** below. **Circle** the number that is **both a square number and an odd number**.

33 49 64 16 15 99 23

6. Look at the rule below:

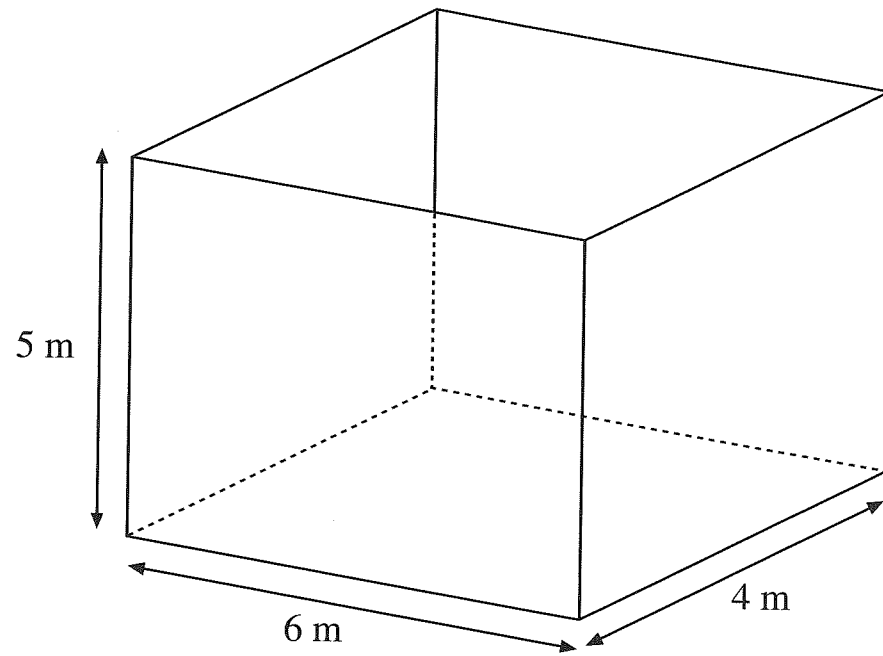
Multiply the previous number by 2 and then subtract 5

Matthew uses this rule to write a sequence. **Which number** does Matthew write down **after the number 6**? Write your answer in the space below.

7. Matthew continues the sequence. **Which number** comes **before 37** in the sequence? Write your answer in the space below.

Do not write in this column

8. The diagram below shows a **water tank**. The tank has a **cuboid** shape.



What **volume** of **water** will the tank hold when it is **full**? Write your answer in the space below.

_____ m³

GO STRAIGHT TO PAGE 4

Do not write in this column

(1)

Missing: My Tadpole

I had a tadpole for a pet,
 but I didn't have him long.
 I had wanted something furry,
 but mum said "no" to cats and dogs.

I caught my tadpole in the lake
 and kept him in a jar.
 I even researched what tadpoles eat,
 so my poor tadpole wouldn't starve.

I took my tadpole everywhere,
 to school and football and the park.
 I'd never seen a grown-up tadpole,
 but thought maybe they looked like sharks!

Quickly time went by and my tadpole
 Started to get longer.
 Then I had to go away and
 Dad promised to feed him while I was gone.

As soon as I got back today,
 I knew something was wrong!
 I had a tadpole for a pet,
 But I didn't have him long.

My lovely tadpole was missing! He was lost!
 He was gone!
 And all that was left in my tadpole's jar
 Was this little, greenish frog.

9. Find the **word** in **verse five** which **rhymes** with **wrong**. Write the word in the space below.

GO STRAIGHT TO PAGE 5

Do not write in this column

(1)

10. Only **one** of the **four** sentences below is **true**. Based on your reading of the poem, tick the **true** sentence.

The tadpole stays in its jar on a bookshelf at all times.

The poet doesn't know that tadpoles change into frogs.

The poet doesn't like furry animals like cats and dogs.

The poet's dad forgets his promise to feed the tadpole.

11. Find the **word** which is **closest in meaning** to **investigated**. The word you are looking for is in **verse one** or **verse two**. Write your answer in the space below.

12. The four words **furry**, **have**, **park** and **quickly** are used in the poem. Tick the correct box to show whether each one has been used in the poem as a **verb**, **noun**, **adjective** or **adverb**.

	verb	noun	adjective	adverb
furry				
have				
park				
quickly				

13. From your reading of the poem, tick the word below that **best** describes the poet's **skills as a pet owner**.

devoted

uncaring

knowledgeable

Do not write in this column

14. Look at the list of **five verbs** below. Each verb is written in the past tense. Write the **present tense** of each of the verbs in the spaces provided. **Be careful with your spelling**. The first one has been done for you.

caught catch

brought _____

hopped _____

saw _____

took _____

15. This question tests your knowledge of **apostrophes**. Look at the **five pairs of words** highlighted in the passage below. In **each pair, only one** word is **correct**. **Circle the correct word** from each pair.

I really enjoyed reading this poem because I am an animal lover. I have no **pets** **pet's** but would love to have one. My **sister's** **sisters** best friend, **whose** **who's** called Katrina, has a dog. **He's** **Hes** a German Shepherd called Harvey. **Its** **It's** not fair - I wish I had a pet too!

Do not write in this column

16. A bottle of lemonade normally costs £1.20. A special offer lets you buy 3 for the price of 2. How much cheaper are three bottles in the special offer compared with three bottles at the normal price? Write your answer in the space below.

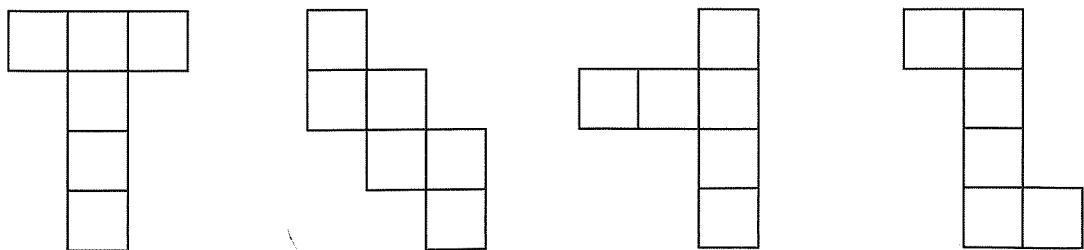
£ _____

17. Look at the four mathematical statements below. Tick the correct box to show whether each statement is true or false.

	True	False
$623 + 623 + 623 + 623 = 4 \times 623$	<input type="checkbox"/>	<input type="checkbox"/>
$1172 - 541 = 541 - 1172$	<input type="checkbox"/>	<input type="checkbox"/>
$821 \div 144 = 144 \div 821$	<input type="checkbox"/>	<input type="checkbox"/>
$591 \times 731 = 731 \times 591$	<input type="checkbox"/>	<input type="checkbox"/>

18. Katie is facing west. She turns through a quarter turn anticlockwise. In which direction is she now facing? Write your answer in the space below.

19. A shape which can be folded up to make a cube is called a net of a cube. Look at the 4 shapes below. Which one is not the net of a cube? Circle that shape.



Do not write in this column

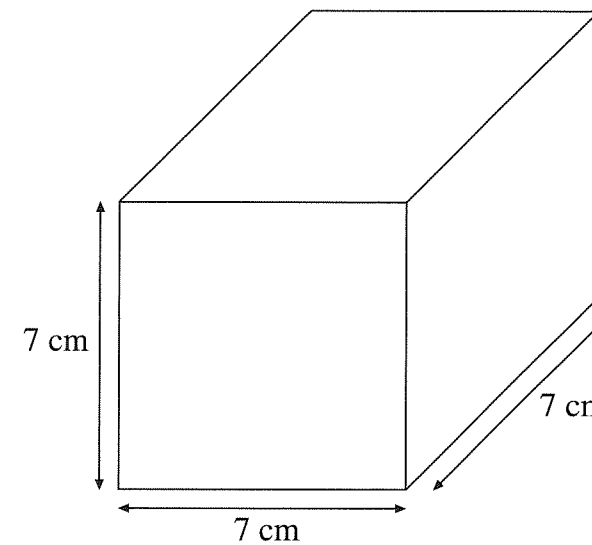
20. A ball is dropped from a height of 160 cm. The ball always bounces up to a height of $\frac{3}{4}$ of its original height. How high does it bounce on its first bounce? Write your answer in the space below.

_____ cm

21. The same ball is dropped again but this time from a different height. It reaches a height of 210 cm on its first bounce. What height was it dropped from? Write your answer in the space below.

_____ cm

22. Look at the cube below. Each side is 7 cm long.



What is the total surface area of the cube? Write your answer in the space below.

_____ cm²

23. What is the total length of all the edges of the cube? Write your answer in the space below.

_____ cm

Do not write in this column

The passage you are about to read contains five errors. Read the passage and then answer the questions that follow it.

The Prison Island

Alcatraz is an island in San Francisco Bay. On the island was built a prison for dangerous criminals. Opened in 1934, the first group of prisoners included the notorious gangster Al Capone. Each won of the 53 prisoners to arrive on the island had their legs clamped in irons. They were chained to the seats of the barge that delivered them to the prisons gate.

(line 1)
(line 2)
(line 3)
(line 4)
(line 5)
(line 6)

The routine of life at Alcatraz included an early start at 6.30 in the morning, a day of hard physical labour and then lights out at 9.30 in the evening. Bad behaviour earned an inmate a day in D Block where the individual would remain locked up in isolation 24 hours a day. With only a diet of bread and water, this punishment was hard to bear. One man spent an amazing 97 days in these conditions.

(line 7)
(line 8)
(line 9)
(line 10)
(line 11)
(line 12)
(line 13)

Can it be a surprise that prisoners tried to escape from the island prison. In total, there were 39 recorded attempted escapes. While making their bid for freedom seven men were shot, one man drownd and five were never found. The other prisoners hoped that their friends had made it to freedom.

(line 14)
(line 15)
(line 16)
(line 17)
(line 18)

24. Each line of the passage is numbered. There is a spelling error in one of the lines. Tick the number of the line containing the spelling error.

- line 3
- line 9
- line 15
- line 17

Do not write in this column

25. A question mark is needed instead of a full stop in one line of the passage. Tick the number of the line where the question mark is needed.

- line 6
- line 13
- line 15
- line 18

26. A word has been used incorrectly in the passage. Tick the number of the line where the error was made.

- line 4
- line 5
- line 12
- line 16

27. There is an apostrophe missing from one of the words in the passage. Tick the number of the line containing the word with the missing apostrophe.

- line 2
- line 4
- line 6
- line 14

Do not write in this column

28. In one line of the passage a comma has been used incorrectly. A full stop rather than a comma should have been used. Tick the number of the line in which this error was made.

line 2

line 9

line 12

line 17

Do not write
in this column

(1)

GO STRAIGHT TO PAGE 12

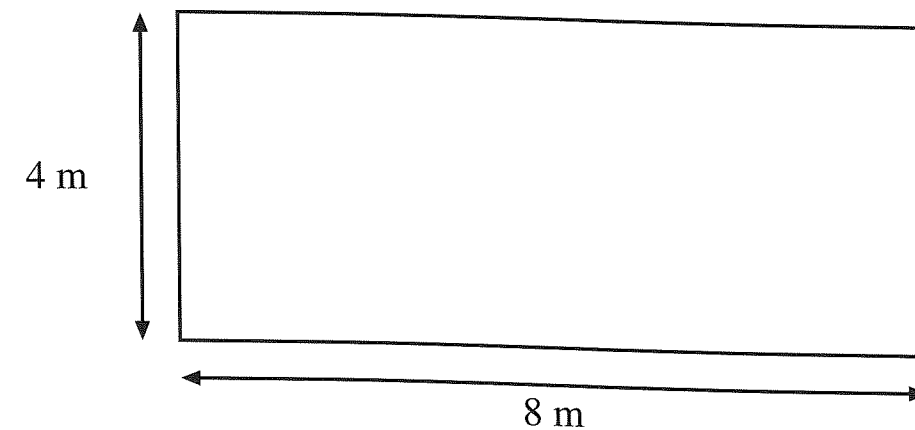
29. A drawer contains **13 pairs** of blue socks and **7 individual** red socks. **How many socks** are in the drawer **altogether**? Write your answer in the space below.

_____ socks

30. There are **360 pages** in a **book**. **Tracey has read 75% of the book**. Tracey reads complete pages and doesn't skip pages. **How many pages are left** to read? Write your answer in the space below.

_____ pages

31. Look at the **rectangle** below. Its **length** is **8 m** and its **breadth** is **4 m**.



What is the **perimeter** of the **rectangle**? Write your answer in the space below.

_____ m

32. Look at the **rectangle again**. A **square** has the **same perimeter** as this **rectangle**. What is the **area** of the **square**? Write your answer in the space below.

_____ m²

Do not write
in this column

(4)

GO STRAIGHT TO PAGE 13

33. Five sprinters ran 100 m. The table below shows the time taken by each sprinter in seconds.

Sprinter A	Sprinter B	Sprinter C	Sprinter D	Sprinter E
10.01 secs	10.1 secs	9.98 secs	10.98 secs	10.11 secs

(a) Which sprinter was the slowest? Circle the correct answer below.

A B C D E

(b) Which sprinter was fastest? Circle the correct answer below.

A B C D E

34. Look again at the table showing the time taken by each sprinter. How much faster was sprinter C than sprinter E? Write your answer in the space below.

_____ seconds

35. The temperature at noon on Monday is -5°C . The temperature increases by 2°C every 24 hours. What is the temperature at noon on Thursday? Write your answer in the space below.

_____ $^{\circ}\text{C}$

36. Gerard wakes up on Wednesday at 7:22 am. He has been asleep for 5 hours and 17 minutes. At what time on Wednesday did he fall asleep? Write your answer, using the 12 hour clock, in the space below.

_____ am

Do not write in this column

The Birthday Surprise

The night before my birthday
I lay in bed awake.
Before my eyes flashed
Visions of parcels, balloons,
Jelly, ice-cream
With heaps of iced birthday cake.

On falling into slumber
The images did not cease.
Now I was there, a tiny me
Amidst the celebration.

Feet sticking in the icing,
I tried to scale the slope.
My icing-covered feet were
Glued there, for me there
Was no hope.

An enormous balloon loomed overhead,
Cutting out the light.
The red shiny surface,
Now signalling danger,
Filled me with such fright.

Stuck there quivering nervously,
White sticky stuff surrounded,
I saw that my terror was in fact
Seriously well founded,

For in a giant hand above,
Came swooping from the night,
A fiery torch, flames golden fierce
The birthday blower's candles to light.

I woke at once, sweat on my brow,
Tucked up securely in my bed.
"Happy birthday!" my family
Chorused loudly from below.
"No cake or balloons for me today,"
In a trembling voice I said.

Richard Briggs

Do not write in this column

37. In **verse two** of the poem which **phrase of 3 or 4 words** means the same as **going to sleep**? Write your answer in the space below.

38. In **verse three** of the poem, which **word** is closest in meaning to **climb**? Write your answer in the space below.

39. In **the last verse** of the poem which **word rhymes** with **said**? Write your answer in the space below.

40. Look at the **five sentences below**. Each sentence describes an event in the poem. Use your **understanding of the poem** to **put these events in the order in which they happened**. Use the numbers **1 to 5** to show the order. The first event has been done for you.

The poet wakes up suddenly from his nightmare.

The poet thinks about his birthday celebrations.

1

The poet dreams of being a tiny figure on a cake.

The poet imagines a big balloon floating overhead.

The poet decides he doesn't want cake after all.

Do not write in this column

41. In **verse six** the poet refers to a "**birthday blower**". Look at the **three statements** below. Which statement **best describes the meaning of birthday blower** in the poem? Tick the **best statement**.

A device for lighting the birthday candles.

The person who is celebrating his birthday.

A party blower which makes a loud noise.

42. **Four different parts of the body** are mentioned in the poem. Write these in the spaces below. The first one has been done for you.

brow _____

43. Write the words below **in alphabetical order** in the spaces provided. The first one has been done for you.

stuff surface sticky swooping surrounded

sticky _____

Do not write in this column

44. Susan is playing with some dice. She rolls one of the dice. Look at the four possible outcomes below.

Outcome A: Susan rolls a 3

Outcome B: Susan rolls an even number

Outcome C: Susan rolls a 3 or a 5

Outcome D: Susan rolls a number which is not a 3

Put the four outcomes in order from least likely to most likely. Write a letter in each of the spaces below. The least likely outcome has been done for you.

_____ A _____ (most likely)
(least likely)

45. People were asked to choose their favourite flavour of crisp. The results are shown in the table below.

Flavour of Crisp	Number of People	Percentage
Plain	531	16%
Salt and Vinegar	679	
Cheese and Onion	1020	
Smokey Bacon	401	
Other	751	

The five percentages below are the percentages of people who chose each flavour:

12% 16% 20% 22% 30%

Use these five percentages to complete the table. One percentage has been inserted for you.

46. In a hockey tournament each team must play 5 games. The five numbers below are the goals scored by a team at the end of the tournament.

2 5 4 3 6

What is the mean (average) number of goals in the tournament for this team? Write your answer in the space below.

_____ goals

47. Another team played 5 games. They scored the following number of goals in their first 4 games:

3 3 1 5

How many goals did they score in their last game if they have a mean score of 3 goals at the end of the tournament? Write your answer in the space below.

_____ goals

48. Yvonne turns a lid one and a half times to open a jar. Through how many degrees did she turn the lid? Write your answer in the space below.

_____ °

Do not write in this column

Do not write in this column

49. One quadrilateral has four right angles.

Another quadrilateral has exactly one pair of parallel sides and no right angles.

Which one of the following statements is true? Tick the correct answer.

The two quadrilaterals are a rectangle and a trapezium.

The two quadrilaterals are a rectangle and a square.

The two quadrilaterals are a parallelogram and a rhombus.

50. Stuart buys a book that costs £7.48. He pays with a £10 note. The shopkeeper gives him change. His change is made up of £1 coins, 10p coins and 1p coins. What is the smallest number of coins that Stuart could receive? Write your answer in the space below.

_____ coins

51. If the shopkeeper gives Stuart two £1 coins and 16 other coins in his change, how many 10p and how many 1p coins would he get? Write your answer in the space below.

_____ 10p coins and _____ 1p coins

Do not write in this column

Vertical column for marking with a '3' at the bottom.

The Cave

Vines dangled over the half-hidden edge. The ground opened and gaped before me, a narrow rope ladder leading into the unknown. It was the only way in and the only way out. With a deep lungful of damp air, I swung a leg onto the first rung and began my descent. I gazed up into the Mexican sun, still strong on my skin and hair. I wouldn't see light again like this for hours and I felt myself shudder, despite the heat.

"Catch," my brother shouted, dropping my swimming goggles and rucksack into my waiting hands when I reached the murky bottom.

The water I caught sight of in the weak beam of my torch was jade green and black – it was all I could see. As my brother climbed down after me, his rucksack hanging from his arm, I stood in the deep cave and called out. I heard dripping water, the sounds of the bright sun-lit jungle above us... and bats.

I tried not to listen to them squeak and scratch unseen above me. In the depths, I put on my goggles and sank into the warm water. "Take a deep breath," my brother warned. Then he disappeared.

I swallowed another lungful of air and followed, diving into the water. Under water and without a light I could see nothing. My fingers felt the rocky ceiling covered in thick moss, searching for the edge that I thought should be somewhere close at hand. As the seconds ticked by, my calm searching became frantic grasping. What if the last breath I took before diving was actually my last breath? I did the worst thing possible ... I panicked!

My chest hurt and the last of the tiny bubbles escaped my lips. My head hit the rocky edge above. No room to surface. No room to breathe. With a desperate effort I propelled myself into the dark. At last, my fingers found the rough edge and I pulled myself to freedom, the surface and AIR.

Gillian Johnson

Do not write in this column

Vertical column for marking.

52. One of the three statements below is true. Tick the true statement.

The two children are near the summit of a Mexican mountain.

The two children are exploring a cave that is deep underground.

The two children are practising their diving at a swimming pool.

53. What word in paragraph one tells us that the writer is unfamiliar with the cave? Write your answer in the space below.

54. Based on your reading of paragraph one, which word best describes the writer's mood in the story? Tick the best answer below.

delighted

confident

apprehensive

55. Which word in paragraph four suggests that the bats aren't visible? Write your answer in the space below.

56. Find the word in paragraph six which is closest in meaning to pushed forward. Write your answer in the space below.

Do not write in this column

57. How did the writer get her goggles? Look at the three statements below. Tick the best answer.

The writer found them in the cave.

She was given them by her brother.

They were in the writer's rucksack.

58. Look at the four words below. For each word find a word from the passage which is opposite in meaning. The first one has been done for you. Write your answers in the spaces provided.

ascent descent _____

strong _____

thin _____

smooth _____

Do not write in this column