

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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MATHEMATICS

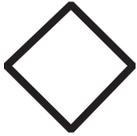
Page	Marks	Score	Check	
1	(2)			
2	(5)			
3	(1)			
7	(4)			
8	(4)			
12	(4)			
13	(4)			
17	(2)			
18	(3)			
19	(3)			
TOTAL 32				

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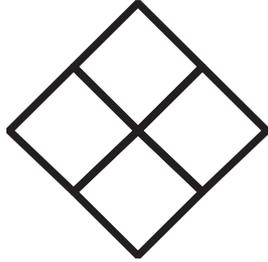
ENGLISH

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				

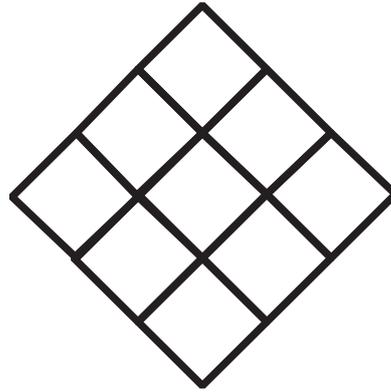
1. Look at the **sequence of 3 patterns** below. Each pattern is **made up of small squares**.



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 **altogether** to make **Pattern 5** and **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

$1400 + 380$

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in this column

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

$$\begin{array}{r}
 2 \ 3 \ 3 \\
 + \ 3 \ \square \ 4 \\
 \hline
 \square \ 1 \ 7
 \end{array}$$

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:

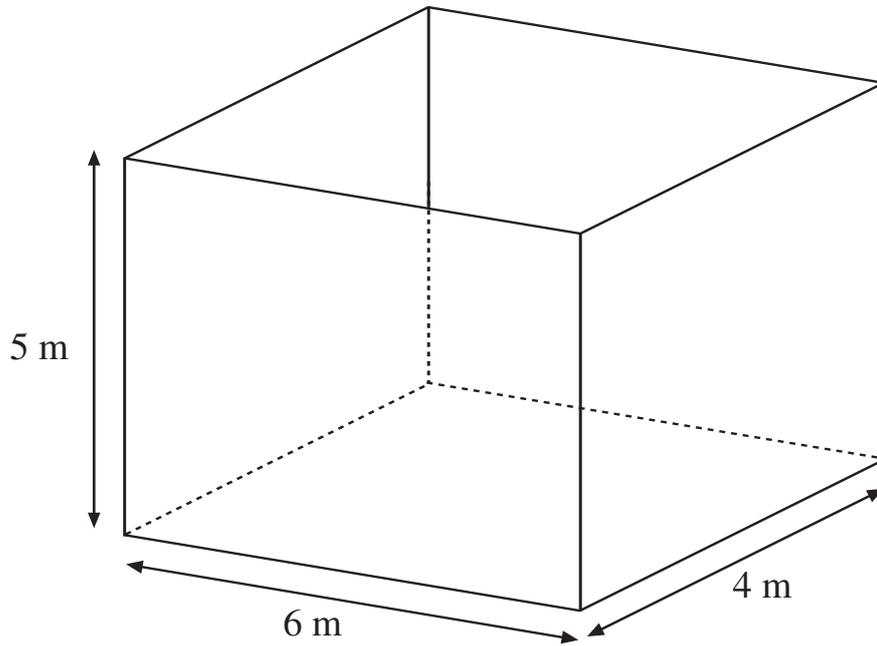
Multiply the previous number by 2 and then subtract 5

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** is the previous number to **69** in the sequence? Write your answer in the space below.

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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

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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.

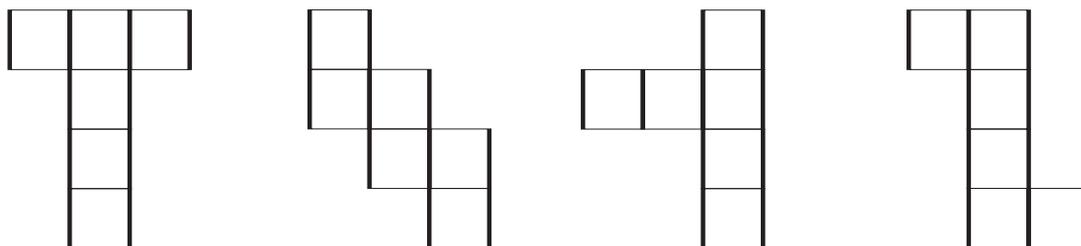
£ _____

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 the correct shape.



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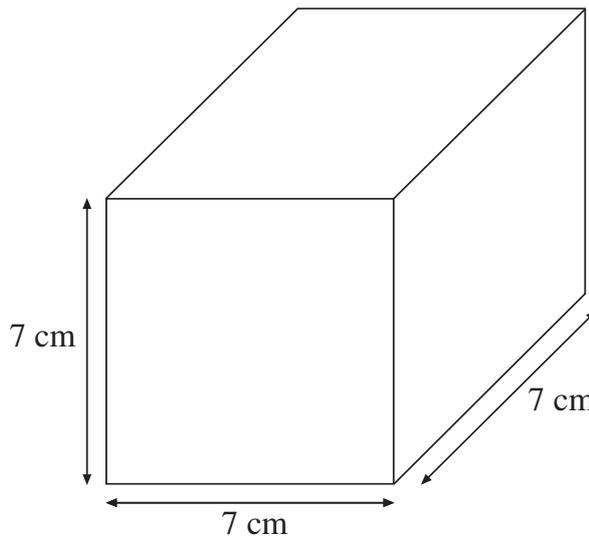
20. A ball is dropped from a height of 160 cm. It bounces up to a height of $\frac{3}{4}$ of its original height. How high does it bounce on its first bounce? Write your answer in the space below.

_____ 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

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

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The Prison Island

Alcatraz is an island in San Francisco Bay. On the island was (line 1)
 built a prison for dangerous criminals. Opened in 1934, (line 2)
 the first group of prisoners included the notorious gangster (line 3)
 Al Capone. Each won of the 53 prisoners to arrive on the (line 4)
 island had their legs clamped in irons. They were chained to (line 5)
 the seats of the train that delivered them to the prisons gate. (line 6)

The routine of life at Alcatraz included an early start at 6.30 (line 7)
 in the morning, a day of hard physical labour and then lights (line 8)
 out at 9.30 in the evening, Bad behaviour earned an inmate (line 9)
 a day in D Block where the individual would remain (line 10)
 locked up in isolation 24 hours a day. With only a diet of (line 11)
 bread and water, this punishment was hard to bear. (line 12)
 One man spent an amazing 97 days in these conditions. (line 13)

Can it be a surprise that prisoners tried to escape from the (line 14)
 island prison. In total, there were 39 recorded attempted (line 15)
 escapes. While making their bid for freedom seven men were (line 16)
 shot, one man drownd and five were never found. The other (line 17)
 prisoners hoped that their friends had made it to freedom. (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

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

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(1)

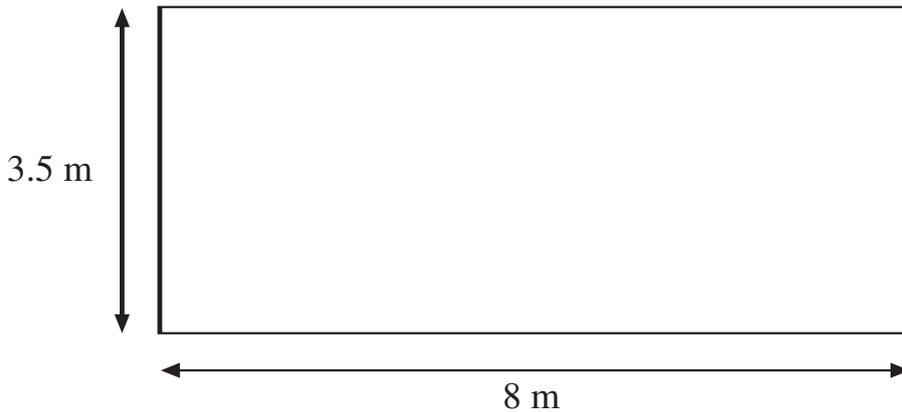
29. A drawer contains **13 pairs** of blue socks and **7 individual** red socks. **How many** socks are in the drawer **altogether**? Write your answer in the space below.

_____ 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 **3.5 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

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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 two sprinters** were **faster** than **sprinter B**? **Circle** the correct answers 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.

_____ °C

36. Gerard **wakes up** on **Wednesday** at **7:22 am**. He has been **asleep** for **9 hours and 17 minutes**. **At what time** on **Tuesday** **did he fall asleep**? Write your answer, using the **12 hour clock**, in the space below.

_____ pm

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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

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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

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(4)

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.

_____ °

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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 heaved 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

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