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

CEA

Common Entrance Assessment

Paper 2

Saturday 23 November 2013

Time: 1 Hour

Please fill in the following from your admission card:

Your Candidate Number _____
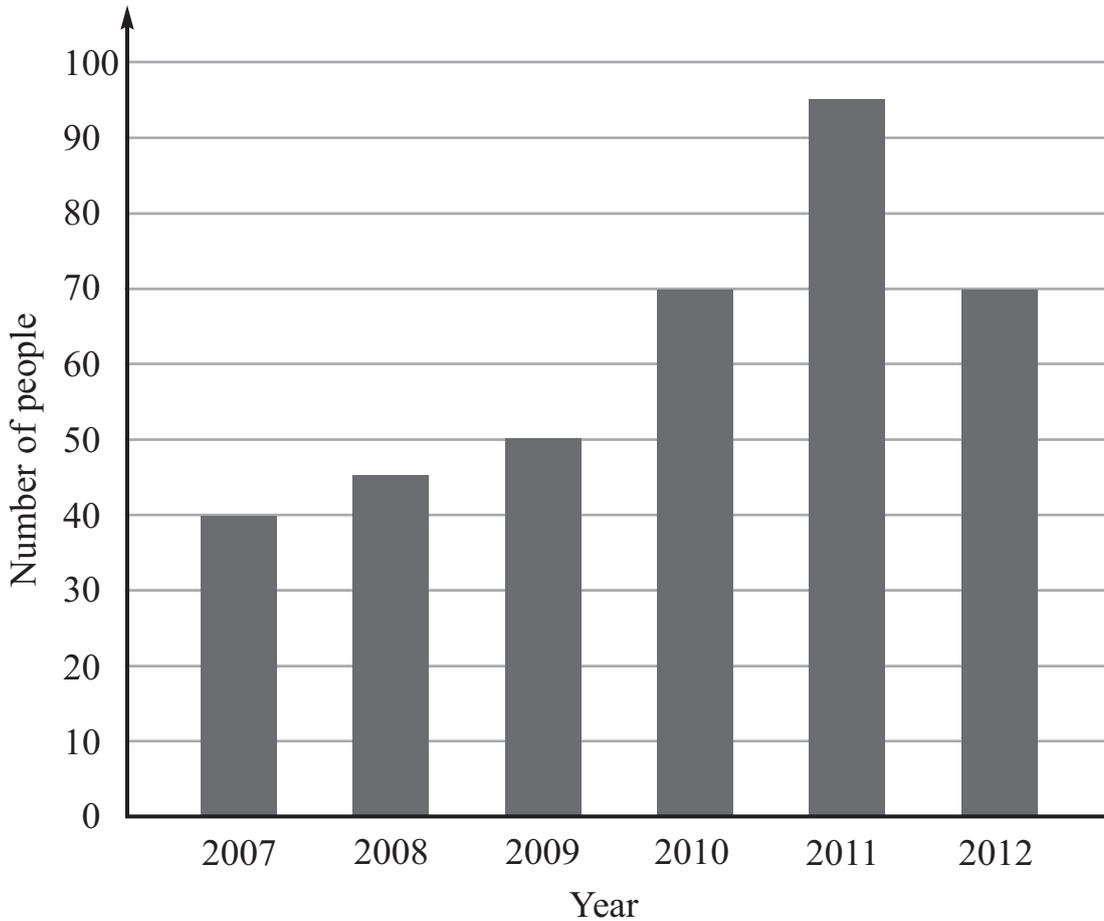
Your Assessment Centre _____

Your Date of Birth _____

Answer all 58 questions in this booklet

Association for Quality Education Limited

1. Each year Treetop School performs a nativity play. The graph below shows how many people came to watch the play each year.

(a) **How many people** watched the play in **2012**? Write your answer in the space below.

_____

(b) How many **more people** watched the play in **2010 compared to 2009**? Write your answer in the space below.

_____

2. What is **6:33 am** as a **24 hour clock time**? Write your answer in the space below.

_____

GO STRAIGHT TO PAGE 2

3. On a particular day the temperature in Paris is **-1 ºC** and the temperature in Belfast is **6 ºC**. How much **higher** is the temperature in Belfast than in Paris? Write your answer in the space below.

_____ ºC

4. Look at the diagram below. It shows a **dotted line** and **2 rectangles** made up of **small squares**. Shade **two small squares** on the diagram so that the **dotted line is a line of symmetry**.
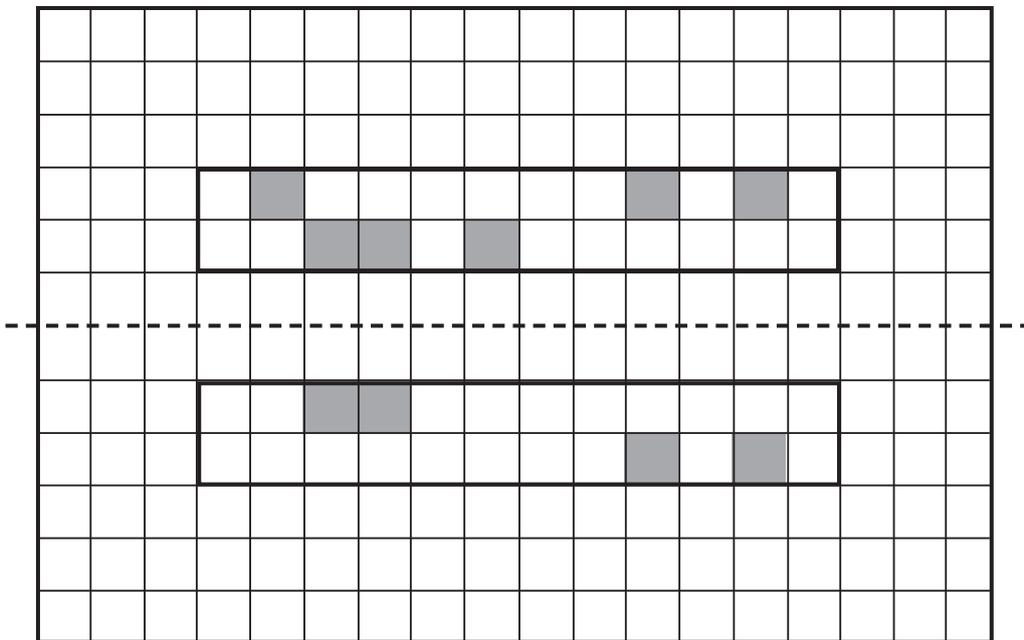
5. In a shop, Jane buys:

7 apples at **10p** each

8 bananas at **20p** each

2 mangos at **£1** each

What is the **total** that Jane will pay? Write your answer in the space below.

£ _____

(3)

6. Zak **thinks of a number**. He **adds 20** to it and **then multiplies by 10**. This gives him the number **270**. What was the number he **first thought of**? Write your answer in the space below.

_____

7. Look at the patterns below. They are formed from **square** tiles. The length of one **side of a square tile is 1 cm**.
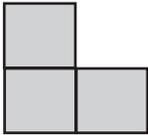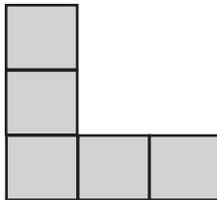
Pattern 1   **Pattern 2**   **Pattern 3**
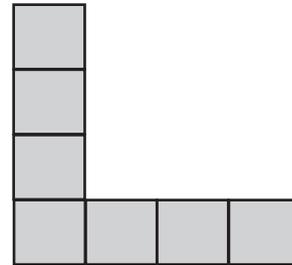
(a) What is the **perimeter** of **pattern 2**? Write your answer in the space below.

_____ cm

(b) How much **longer** is the **perimeter of pattern 3** than **pattern 1**? Write your answer in the space below.

_____ cm

8. Look again at the patterns in **Q7**. Use these patterns to find the **perimeter** of **pattern 4**. Write your answer in the space below.

_____ cm

(3)

The Moth

Delicate tissue wings flutter silently in flight
Through the darkness toward the light.
The brown-grey, dusty moth whispers,
Unlike its colourful kin, the butterfly
Who shouts with rainbow radiance when it stirs.

Adorned, instead, with subtle camouflage
From silky cocoon, not chrysalis emerge.
Soft, velvety body and finest feathery feelers
With modest wings resting low,
Not on show.

One human assault and nothing remains, nothing at all
Nothing but a dusty mark upon the wall.
As dawn breaks, the butterflies return
To dance, carefree, among the garden's blooms.
The nocturnal cousin regrettably gone.

T Cunningham

9. Which word in **verse one** is **closest in meaning** to family member or relative? Write your answer in the space below.

_____

10. In **verse two** the word **instead** is used to **contrast** the butterfly with the moth. Find a word from **verse one** which is used in the same way. Write your answer in the space below.

_____

11. Look at **verse 1** of the poem. Which **four word phrase** tells us that butterflies are **very colourful** when in motion? Write your answer in the space below.

_____

12. What happens to the moth in **verse three**? Tick ☑ the **best** answer below.

The moth cannot breathe in the dusty conditions. ☐

The moth is allergic to garden blooms. ☐

The moth is killed by a person. ☐

The moth dies of natural causes. ☐

13. Look at **verse two** of the poem. The word **subtle** is used. Which of the following words is **opposite in meaning** to subtle? Tick ☑ the **correct** answer.

obvious ☐

elusive ☐

delicate ☐

sheer ☐

14. Look at the **three statements** below. **Based on your reading of the poem**, tick ☑ each statement **true** or **false**.

	True	False
The moth has a hard, velvety body.	☐	☐
The moth moves towards the light.	☐	☐
The moth is a flamboyant creature.	☐	☐

(5)

15. Write the **plural** of each of the following words in the space provided. This first one has been done for you. **Be careful with your spelling**.

butterfly   <u>butterflies</u>

scissors   _____

pony   _____

kangaroo   _____

16. Look at the function machine below.

In ➡ | **- 2** | ➡ | **x 9** | ➡ Out

(3)
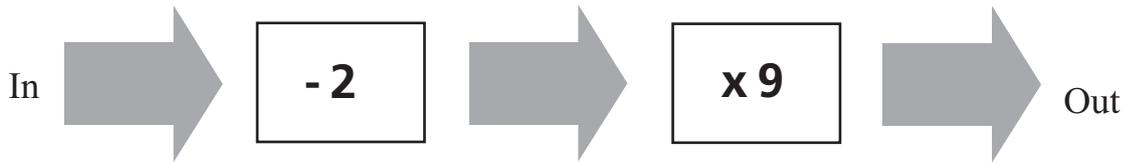
Use this function machine to **complete the table below**. The first one has been done for you

In	Out
5	27
2	
	72

17. How many **faces** does a **triangular prism** have? Write your answer in the space below.

_____ faces

18. Each week Jamie saves some of his pocket money to buy a DVD which costs **£20**. Below are the amounts he saved over **5 weeks**.

£1.70   **£2.40**   **£1.90**   **£2.00**   **£1.50**

How much money does he **need to add** to his savings to buy the DVD? Write your answer in the space below.

£ _____

(3)

19. Look at the equation below.

    1.2 + x = 4.8

    What is the value of **x**? Write your answer in the space below.

    x = _____

20. Mr Creakle's class collects money each week for charity. Here are the amounts collected over four weeks in January.

    £4.60   **£3.40**   **£2.00**   **£1.60**

    What is the **average (mean)** amount collected by Mr Creakle's class? Write your answer in the space below.

    £ _____

21. What is the **range** of money collected by Mr Creakle's class? Write your answer in the space below.

    £ _____

22. Reece starts by facing **south**. He wants to face **east**. To do this he has to change direction. Look at the three direction changes below. After which of these direction changes will Reece **not be facing east**? Tick ☑ the **correct** answer below.

    A **quarter-turn anticlockwise**   ☐

    A **half-turn clockwise** followed by a **full-turn anticlockwise**   ☐

    A **quarter-turn clockwise** followed by a **half-turn anticlockwise**   ☐

23. Write the number **seventeen and three quarters** as a **decimal** number. Write your answer in the space below.

_____

_____

Do not write in this column

(1)

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

Fellow environmentalists (line 1)

Let me ask you a question. Do you think that it's a good thing that (line 2)

now, in 2012, it takes longer to travel the three miles from Chelsea (line 3)

to Charing Cross in London than it did in 1750. (line 4)

Well, it does. In 1750, in the age of the horse and cart, you could (line 5)

cross those three miles at the heart of London far faster than you (line 6)

can now, in the age of the Porsche and Ferrari. Pretty pathetic, (line 7)

isn't it? Our reliance on the car won't do; we must get on the bus. (line 8)

We can't continue relying on the car. Do you want to continue ruining (line 9)

the world with exhaust fumes melting the polar ice caps? (line 10)

Yet their is a solution. It's long, metal and has two decks. Is (line 11)

this a magical device? No, its called a double-decker bus! (line 12)

The current traffic situation won't do. Cars with only one (line 13)

human on board are polluting the air, clogging our roads and are (line 14)

hazardous to pedestrains. Get on the bus, because the automobile (line 15)

is dirty and dangerous. My friends, there is no other way. To continue (line 16)

along the road of car dependency is to follow the road to nowhere. (line 17)

Get out there, get to the bus stop and get on the number 23 bus to (line 18)

a cleaner, safer future, Thank you for listening. (line 19)

24. Each line of the passage is numbered. A word has been used incorrectly in the passage. Tick ☑ the number of the line where the error was made.

line 2 ☐

line 11 ☐

line 16 ☐

line 17 ☐

(1)

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 4 ☐

line 7 ☐

line 9 ☐

line 13 ☐

26. There is a spelling error in one of the lines. Tick ☑ the number of the line containing the spelling error.

line 10 ☐

line 13 ☐

line 14 ☐

line 15 ☐

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 3 ☐

line 10 ☐

line 12 ☐

line 16 ☐

(3)

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   5   ☐

line   7   ☐

line   18   ☐

line   19   ☐

29. Each **edge** of a **cube** has length **8 cm**. What is the **total length of all the edges** of the cube? Write your answer in the space below.

    _____ cm

30. What is the **total area** of all the **faces** of the **cube**? Write your answer in the space below.

    _____ cm^2

31. Adam takes **4 hours and 20 minutes** to run a marathon. What is this time in **minutes**? Write your answer in the space below.

    _____ minutes

32. Look at the **four statements** below. Tick ☑ to show whether each statement is **true** or **false**.

	True	**False**
Perpendicular lines cannot meet.	☐	☐
Parallel lines meet at right angles.	☐	☐
The angles in a triangle add up to 180°.	☐	☐
Any two sides of an isosceles triangle are equal in length.	☐	☐

33. A **number** is **missing** from the statement below. Write the number in the space below which correctly completes the statement.

    If $23 \div A = 5$ then $46 \div A =$ _____

Do not write in this column

(5)

34. The diagram below shows the plan of a **garden**. The length of the garden is **12 m** and the width of the garden is **10 m**. The **shaded region** is a **vegetable plot** of length **6 m** and width **5 m**. The **rest of the garden** is **grass**.

12 m

4 m

6 m

5 m

(a) Calculate the **total area** of the **garden**. Write your answer in the space below.

_____ m²

(b) What **percentage** of the **garden** is **grass**? Write your answer in the space below.

_____ %

(1)

35. The **area of the rectangle** below is **75 cm^2**. The length of one side of the rectangle is **15 cm** and the length of another side is **x** cm.

x cm

15 cm
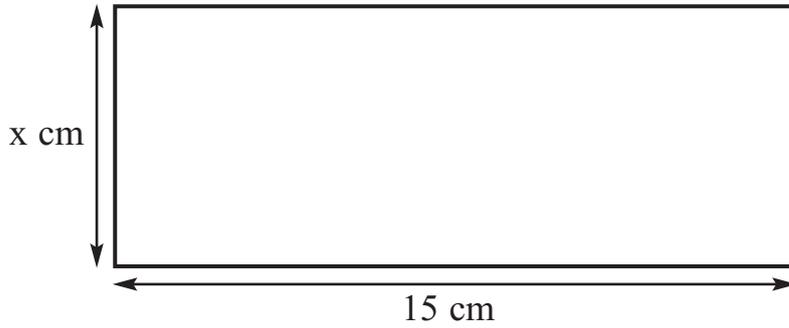
What is the value of **x**? Write your answer in the space below.

_____

36. Multiplying a number by **1000** and then dividing the answer by **100** is the same as...

multiplying the number **by 100** ☐

multiplying the number **by 10** ☐

dividing the number **by 10** ☐

dividing the number **by 100** ☐

Tick ☑ the correct answer.

(1)

The Port

The excitement mounts
as the car crests over
the brow of the hill and someone
screams: "I can see the sea!"

The car, packed with children, parents,
buckets, spades, sandwiches and flasks of tea,
meanders through avenues
before rumbling down that little lane

and sinking into the sand.
The seagulls call to us
as the waves crash ferociously
onto shore. We are here.

Shoes and socks are
abandoned on the back seat
in the struggle to be the first
to sink your toes in the water.

Bodies are stripped down, as clothes
are replaced with swimming togs.
The race is on! "Last one in's
a chicken!"

The soft sand gives way
to a hard moisture - replaced by
the bracing surf
crashing around your middle.

The screams are those of joy.
There is nothing better.
Teeth chatter and toes tingle, but
it doesn't matter. We are here.

Dennis McGuire

37. Which **noun** in **verse one** has the following **two** meanings:
a section of road at the top of an ascent and
the part of a person's face from the eyes to the hairline.
Write your answer in the space below.

_____

(1)

38. Which statement below describes **how the car is being driven** in **verse two** of the poem? Tick ☑ the **best** answer.

The car is travelling at a very high speed. ☐

The car is being driven on a motorway. ☐

The car is following a winding course. ☐

The car is being driven carelessly. ☐

39. In **verse five** the word **in's** is used. This word is a replacement for **two separate** words. Look at the list below. Choose the **two words** which **in's** has replaced. Tick ☑ the **correct** answer.

in his ☐

in this ☐

in has ☐

in is ☐

40. Which **noun** in **verse four** tells us that the children are **trying very hard** to win the race to the water? Write your answer in the space below.

_____

41. The words **see** and **sea** are used in **verse one**. These words are homophones. Homophones are words which **sound the same** but have **different spellings** and **meanings**. In the **two** sentences below **circle** the **correct word** from the pair of homophones so that the sentences make sense.

I here hear that there our are very few clean beaches in this area. I love to visit the seaside and take a walk along the peer pier.

42. The words **soft** and **hard** are opposites. Find the word **opposite in meaning** to each of the words below. Write your answer in the space provided. The answers all appear in the poem. **Be careful with your spelling**.

large   _____

up   _____

floating   _____

front   _____

43. Look at **verse six**. What **two word** phrase tells us that the author finds the **sea invigorating**? Write your answer in the space below.

_____

Do not write in this column

(3)

44.   Look at the statements below. Tick ☑ each statement **true** or **false**.

	True	False
12 has three factors	☐	☐
102 is a multiple of 12	☐	☐
15 has no even factors	☐	☐
All prime numbers are odd	☐	☐

45.   Look at the **Carroll diagram** below. It has four boxes. Bernadette has been given the task of writing whole numbers in the Carroll diagram. You can see that Bernadette has already written the number **16** in one of the four boxes of the Carroll diagram.

	Prime	Not Prime
Square		16
Not Square		

(a)   **In which box** should she write the number **8**? Write **8** in the correct box.

(b)   **In which box** should she write the number **13**? Write **13** in the correct box.

46.   A number **between 31 and 41** is a **multiple of 3 and a multiple of 4**. Write the number in the space below.

_____

Do not write in this column

(3)

47. Look at the pattern below. Find the **next two numbers in the pattern**. Write your answers in the spaces below.

1,   1,   2,   3,   5,   8,   13, ——————— , ———————

48. Convert **2057 mm** to **metres** Write your answer in the space below.

——————— metres

49. Penny goes to secondary school. She has **17 lessons** each week. The lessons she attends in one week are listed below:

5 lessons of **Mathematics**

4 lessons of **English**

3 lessons of **P.E.**

2 lessons of **Geography**

2 lessons of **History**

1 lesson of **Drama**

Penny misses one of her lessons each week in order to practise on the piano. **The lesson is chosen at random**. Look at the **5** events listed below. Put the **events in order** from **least likely** to **most likely**.
One has been done for you.

A She will miss a lesson in **Mathematics**

B She will miss a lesson in **Geography**

C She will miss a lesson in **Geography or History**

D She will miss the lesson in **Drama**

E She will miss a lesson **other than P.E.**

___D___   _____   _____   _____   _____
(least likely)   **(most likely)**

(3)

50. **Two** of the **angles** in a **triangle** are **49º** and **82º**. What **type** of triangle is it? Tick ☑ the correct box below.

Equilateral ☐

Isosceles ☐

Scalene ☐

51. A test **lasts 90 minutes**. The test **starts** at **9:15 am**. At what time will the test **finish**? Write your answer in the space below using the **12 hour (am/pm)** clock.

_____

Do not write in this column

(2)

Texan Tornado

The sky darkened overhead. Storm clouds swirled ominously, as crowds of people rushed for cover. All around, Toby could hear the hollering of men in uniforms and vehicle horns articulating their drivers' frustrations. He heard the occasional sharp intake of breath and gasp of shock from the town's inhabitants, many of whom were huddled together in the basement of the small grocery store.

Then, in an instant, the noise ceased. This was the second tornado in a month and Rushfield still bore the scars of its last hit. Garden fences were strewn on the ground, and many highways remained blocked by fallen trees. The forecasts had predicted another tornado, but as the days had passed without event, people relaxed and thought of the many times the forecasts had been wrong. Then, it came. Toby peered through a small window at foot level, onto the desolate street. Plastic bags danced gracefully with every gust of wind. Twirling, twisting high and then billowing into fluffy pillow-shapes and slowly floating to the ground.

He knew, for he had experienced many tornados in his life, that the bags would soon be swept upward with a force so strong it could raise a car. He knew, for he had assisted in the clean-up efforts after many tornados, that the destruction and demolition would soon be in evidence all around. As an adult Toby had volunteered in the repair of homes and public buildings on several occasions. He knew, for he had felt the grief and loss many times in his life, that the lives of many of those around him would never be the same again. As a pensioner Toby regretted the fact that he no longer possessed any photos to remind him of his dead wife's face, for his home and its contents had been damaged in the previous month's tornado.

The electricity supply would stop at some point soon and their basement shelter would be plunged into darkness. Alarms from the town's shops and homes would drone incessantly amidst the howling and crashing of Mother Nature's fierce forces. In contrast to the weeping and wailing of those sharing refuge underground, Toby was silently still. He had seen it all before and no longer felt that he had anything to lose.

Do not write in this column

52. Which **word** below describes the scene in **paragraph one**?
Tick ☑ the **best** answer.

noisy ☐

calm ☐

busy ☐

(6)

53. Which word in **paragraph one** tells us that people are **shouting**?
Write your answer in the space below.

_____

54. **Based on what you have read** in **paragraphs one and two**, why might
the town be **unprepared** for the **second** tornado? There are **two** correct
answers. Tick ☑ the **correct** answers below.

The second tornado had not been forecast. ☐

Weather predictions had been wrong in the past. ☐

Time passed and people became complacent. ☐

55. Look at the three statements below. **Based on your reading of the
poem**, tick ☑ each statement **true** or **false**.

	True	False
Toby is a young man.	☐	☐
Toby is terrified.	☐	☐
Toby is a widower.	☐	☐

56. Alliteration is the **repetition of consonants** at the **start** of a **series of words**. An example from the passage is "fierce forces". Find an example of alliteration in **paragraph two** and write the **two words** in the space below.

_____

57. **Volunteer** is the **present tense** of **volunteered**. Write the **present tense** of the following words from the passage in the spaces below. **Be careful with your spelling**.

swept   _____

predicted   _____

regretted   _____

58. Which word below describes how Toby feels in the final paragraph? Tick ☑ the **best** answer.

cheerful   ☐

resigned   ☐

nervous   ☐

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