

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

CEA

Common Entrance Assessment

Paper 1

Saturday 9 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

NOT TO BE FILLED
IN BY THE PUPIL

MATHEMATICS

Page	Marks	Score	Check
1	(3)		
2	(4)		
3	(1)		
7	(4)		
8	(3)		
9	(1)		
13	(2)		
14	(2)		
15	(3)		
16	(1)		
20	(3)		
21	(2)		
22	(3)		
TOTAL 32			

NOT TO BE FILLED
IN BY THE PUPIL

ENGLISH

Page	Marks	Score	Check
4	(3)		
5	(5)		
6	(2)		
10	(1)		
11	(3)		
12	(1)		
17	(2)		
18	(4)		
19	(3)		
23	(1)		
24	(4)		
25	(3)		
TOTAL 32			
TOTAL SCORE			

1. What is **8:35 pm** as a **24 hour clock time**? Write your answer in the space below.

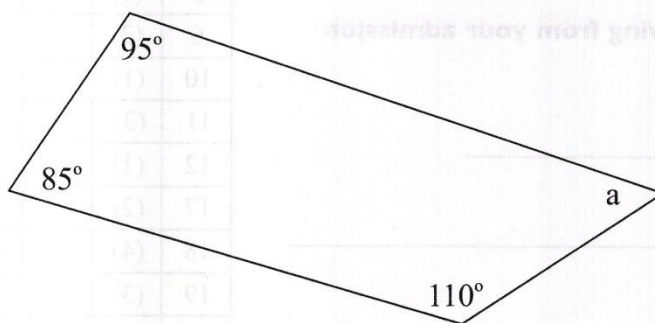
2. Look at the function machine below.



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

In	Out
8	7
4	
	6

3. Look at the quadrilateral below.



What is the **size of the angle a**? Write your answer in the space below.

GO STRAIGHT TO PAGE 2

Do not write
in this column

(3)

4. A cook is cutting cakes. The cook cuts **each cake** into **quarters**. Into **how many** quarters can **8 cakes** be cut? Write your answer in the space below.

_____ quarters

5. Hannah and Sarah both donate some of their pocket money to charity. **Hannah** gets **£12** a week pocket money. **Sarah** gets **£9** a week pocket money. **Hannah** donates **one quarter** of her pocket money and **Sarah** donates **half** of her pocket money. What is the **total amount of money** they donate to charity? Write your answer in the space below.

£ _____

6. Angle **x** is less than **90°**. Angle **y** is less than **90°**.

One of the 4 statements below is **true**. Tick ☒ the true statement.

$x + y$ is **always** an **acute** angle. ☐

$x + y$ is **always** an **obtuse** angle. ☐

$x + y$ can be an **acute** or an **obtuse** angle. ☐

$x + y$ can **sometimes** be a **reflex** angle. ☐

7. **Cuboid A** measures **2 cm** by **5 cm** by **3 cm**. **Cuboid B** measures **4 cm** by **10 cm** by **6 cm**. How much **greater** is the **volume** of **cuboid B** than the **volume** of **cuboid A**? Write your answer in the space below.

_____ cm^3

Do not write
in this column

8. The temperature of a freezer is -4°C . It is switched off. **Five hours** later its temperature has risen by 10°C . What is the temperature of the freezer **five hours** after it is switched off? Write your answer in the space below.

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

Do not write
in this column

Teddy

His worn and ragged face peers down,
One-eyed and tatty,
Limp limbs dangle by a thread,
My childhood friend,
my precious Ted.

His eye has watched with great intent,
birthdays, anniversaries and summers'
days spent at the beach.
I shake him and some sandy remnants
fall - he seems so small now in my adult hands!

His matted fur, once smooth and silky,
there in patchwork
revealing a beige and balding
fabric flesh below,
caressed nonetheless with fond affection.

On a lonely shelf he waits patiently
For play, a purpose, a game of pretend,
Another little girl perhaps for
My precious Ted,
My childhood friend.

Anonymous

9. When **two or more words are similar in meaning** they are called **synonyms**. Circle **three words** from the list below **which are synonyms**.

worn precious ragged tatty peers dangle

10. Which **four word phrase** in **verse two** tells us that the teddy **paid particular attention** to certain events in his owner's life? Write your answer in the space below.

11. An **apostrophe** has been used at **the end of the second line of verse two**. Why has the poet used the apostrophe? Tick ☒ the correct explanation below.

It helps to make the verse more interesting for the reader. ☐

It is used to replace a full stop at the end of the second line. ☐

It indicates that more than one summer was spent at the beach. ☐

12. Which **word** in **verse three** tells us that the teddy's fur was smooth and silky **in the past**? Write your answer in the space below.

13. **One** of the following **words** used in **verse four** is **not** an **adjective**. Tick ☒ the word below which is not an adjective.

lonely ☐

patiently ☐

little ☐

precious ☐

14. **Based on your reading of the poem**, tick ☒ the two statements below **true** or **false**.

True **False**

The poet is male ☐ ☐

The poet is a child ☐ ☐

Do not write
in this column

15. Write the **plural** of each of the following words in the space provided.
Be careful with your spelling.

beach _____

shelf _____

game _____

Do not write
in this column.

16. A packet of pens contains 6 pens. A box contains 20 packets of pens. A crate contains 100 boxes. How many pens are there in a crate?

Write your answer in the space below.

_____ pens

17. What are the values of x and y in the calculations below?
Write your answers in the spaces provided.

$$211 - x = 179$$

$$y \div 6 = 60$$

$x =$ _____ and $y =$ _____

18. Look at the four lengths below. Which of these is the same as 47 cm?
Tick ☒ the correct answer.

4700 m ☐

4.7 m ☐

0.47 m ☐

0.047 m ☐

19. Max is 1.4 m tall at the start of 2012. At the start of 2013 he is 9 cm taller than at the start of 2012. How tall is he at the start of 2013?
Give your answer in centimetres. Write your answer in the space below.

_____ cm

Do not write
in this column

20. Six people are asked to count the number of carrier bags in the boot of their family car. Look at their answers below.

1 1 2 2 4 2

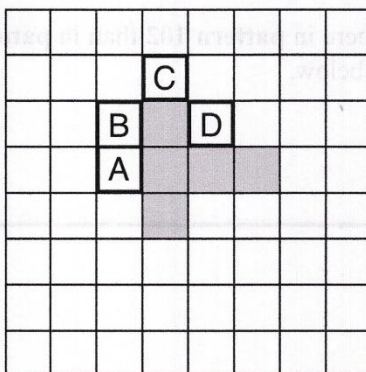
What is the **mean (average)** number of carrier bags? Write your answer in the space below.

_____ carrier bags

21. What is the **range**? Write your answer in the space below.

_____ carrier bags

22. In the diagram below the **shaded squares** make up **part** of the **net** of a **cube**. **One square** of the net is **missing**. The diagram also has **four unshaded squares** labelled **A, B, C and D**.



Which one of the **four unshaded squares** should be **shaded** to complete the net? Tick ☒ the correct letter below.

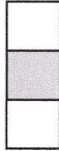
- A ☐
- B ☐
- C ☐
- D ☐

Do not write
in this column

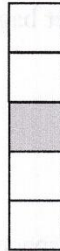
23. Look at the sequence of **three** patterns below. Each pattern is made up of **unshaded** squares and a **shaded** square.

Do not write
in this column

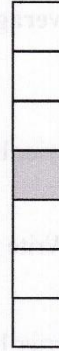
Pattern 1



Pattern 2



Pattern 3



- (a) How many **unshaded** squares are needed to make **pattern 6**?
Write your answer in the space below.

_____ unshaded squares

- (b) How many **more squares** are there in **pattern 102** than in **pattern 101**?
Write your answer in the space below.

_____ squares

GO STRAIGHT TO PAGE 10

(1)

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

Do not write
in this column

Panda-monium!

2012 saw the arrival of two popular new inhabitants for Edinburgh Zoo. Tian Tian and Yang Guang have moved to the zoo in the hope that they produce a cub in the next ten years, The population of giant pandas in the wild is currently around 1500. This is still low despite the population being sustained through research carried out by selected zoos across the world. In addition to sharing research with Chinese conservationists, Edinburgh Zoo will also be raising funds to support other giant panda conservation projects in the wild. Edinburgh Zoo will be the latest zoo in the Western hemisphere to have giant pandas. There are four zoos in North America that house giant pandas, with others in Mexico City, Berlin, Vienna and Madrid.

In the wild, giant pandas live in a few mountain ranges in central China, in Sichuan, Shaanxi, and Gansu Provinces. They once lived in lowland areas, but farming, forest clearing, and other development now restrict giant pandas to the mountains. Giant pandas live in broadleaf and coniferous forests, eating a diet of bamboo. Who can resist the chance to see these elusive creatures nearer home.

The crowds who have flocked to Edinburgh Zoo this year haven't been disappointed. Lets hope we'll here the pitter-patter of tiny feet in the years to come!

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 4 ☐

line 14 ☐

line 17 ☐

line 21 ☐

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 3 ☐

line 7 ☐

line 11 ☐

line 19 ☐

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

line 4 ☐

line 5 ☐

line 6 ☐

line 10 ☐

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 12 ☐

line 15 ☐

line 21 ☐

line 22 ☐

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 4

☐

line 12

□

line 14

9

line 18

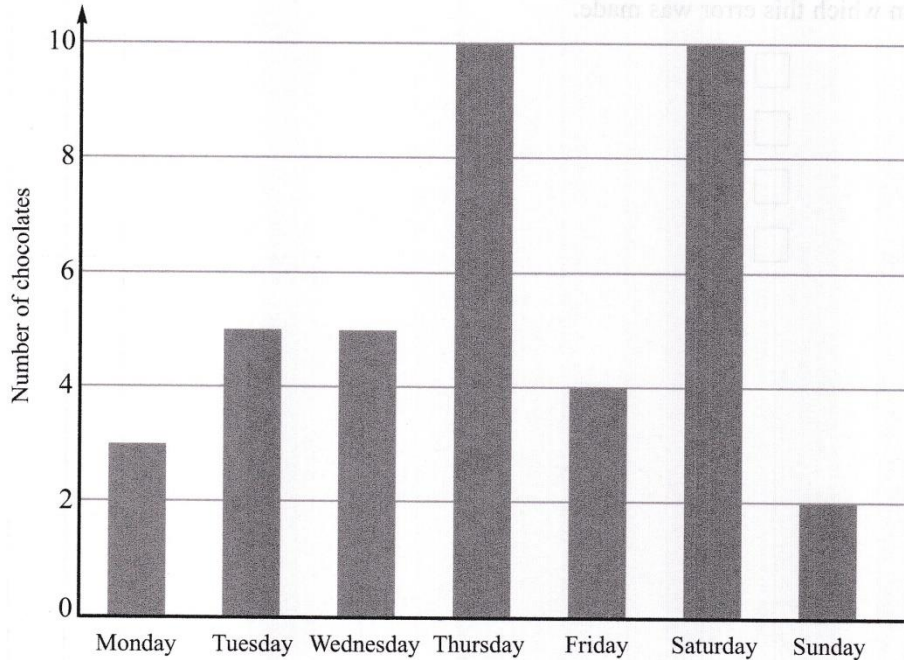
11

Do not write
in this column

GO STRAIGHT TO PAGE 13

(1)

29. Katie records the **number of chocolates** she **eats each day** for a week. She draws the graph below.



- (a) On which **day** did she eat the **fewest chocolates**? Write your answer in the space below.
- _____
- (b) How many **more** chocolates did she eat on **Wednesday** than on **Monday**? Write your answer in the space below.
- _____

30. Raj sees **20 butterflies** in his garden. He notices that **2** of the butterflies are **white**. What **percentage** of the butterflies he sees are **white**? Write your answer in the space below.
- _____ %

GO STRAIGHT TO PAGE 14

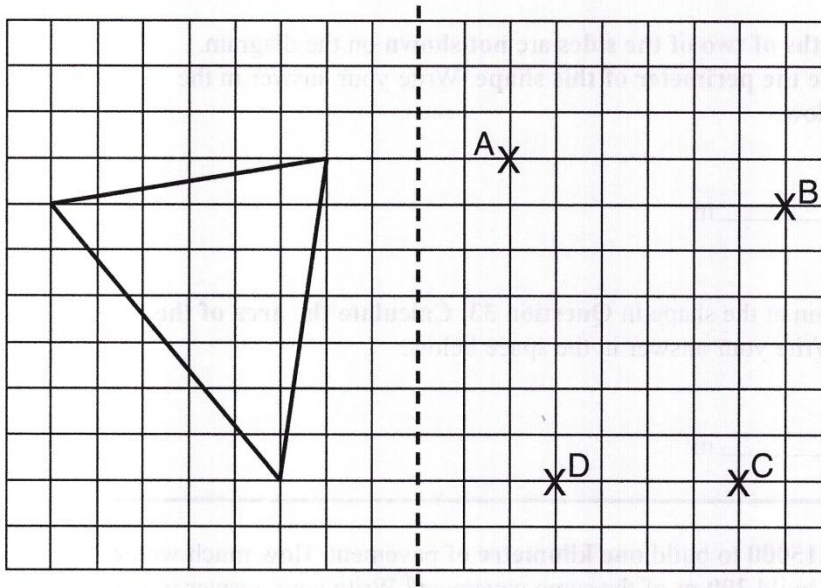
Do not write
in this column

(2)

31. In a game played with shapes, **squares** and **pentagons** are scattered on a table so that none of the shapes touch. **How many sides in total do four squares and three pentagons have?** Write your answer in the space below.

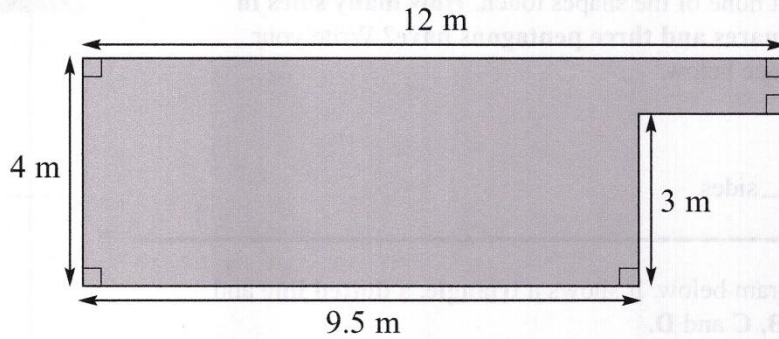
_____ sides

32. Look at the diagram below. It shows a **triangle**, a **dotted line** and four **points, A, B, C and D**.



The triangle is **reflected** in the dotted line. Which of the points is **not** one of the **corners** of the **reflected triangle**? Select the correct answer by writing **A, B, C** or **D** in the space below.

33. Look at the shape below.



The **lengths of two of the sides** are **not shown** on the diagram.
Calculate the perimeter of this shape. Write your answer in the space below.

_____ m

34. Look again at the shape in **Question 33**. **Calculate the area of the shape.** Write your answer in the space below.

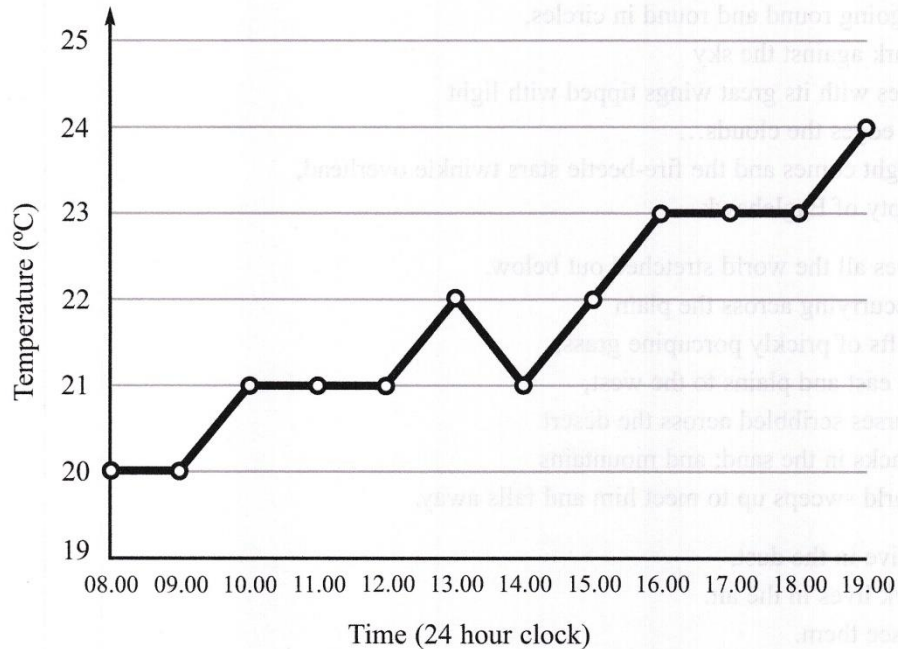
_____ m²

35. It costs **£15000** to build **one kilometre** of pavement. How much would it cost to build **200 m** of the same pavement? Write your answer in the space below.

£ _____

Do not write
in this column

36. Aoife keeps tropical fish. She records the temperature of the water **every hour**. Temperatures are recorded in $^{\circ}\text{C}$. Times are given using the **24 hour clock**.



- (a) What was the **temperature** of the water at **4 pm**? Write your answer in the space below.
- _____ $^{\circ}\text{C}$
- (b) On only **one occasion** was the recorded **temperature lower** than the temperature **one hour earlier**. At **what time** was this lower temperature recorded? Write your answer in the space below using the **24 hour clock**.
- _____

Eaglehawk

Eaglehawk is like a leaf in the air
 All day long going round and round in circles,
 Sometimes dark against the sky
 And sometimes with its great wings tipped with light
 As the sunset edges the clouds...
 Only when night comes and the fire-beetle stars twinkle overhead,
 Is the sky empty of Eaglehawk.

Eaglehawk sees all the world stretched out below,
 The animals scurrying across the plain
 Among the tufts of prickly porcupine grass,
 Valleys to the east and plains to the west,
 And river-courses scribbled across the desert
 Like insect tracks in the sand; and mountains
 Where the world sweeps up to meet him and falls away.

The animals live in the dust,
 But Eaglehawk lives in the air.
 He laughs to see them.
 And when the pans dry up and the rivers shrink,
 He laughs still more, and laughing
 Sweeps half across the world to drop and drink.

William Hart-Smith

37. In **verse one**, which word is **closest in meaning** to **large**?
 Write your answer in the space below.

38. Look at **verse two**. What does Eaglehawk **see**?
 Look at the three answers below. Tick ☒ the **best** answer.

- the porcupines moving in the grass ☐
 the people sweeping up on the mountain ☐
 the animals moving quickly across the plain ☐

GO STRAIGHT TO PAGE 18

Do not write
 in this column

(2)

39. In **verse three** of the poem the word **pans** is used. Look at the three statements below. **One** of these statements gives the **meaning** of the word **pans** as it is **used in the poem**. Tick ☒ the **best** statement.

Pans are basins or depressions in the earth. ☐

Pans are vessels used in preparing food. ☐

Pans are metal containers for detecting gold. ☐

40. Look at **verse two**. Why does the poet **compare** the **river-courses** to **insect tracks**? Tick ☒ the **best** answer below.

The Eaglehawk thinks he sees insects in the rivers below. ☐

The rivers look very small from the Eaglehawk's point of view. ☐

The Eaglehawk sees animals feeding on insects by the river. ☐

41. Eaglehawk is a **compound word**. It is made by **putting two words together to create a new word**. For example, the words **work** and **man** together make the word **workman**. Look at the **list of four words** below.

weight flower board weed

From this list choose the **best** word which makes a compound word when **written in one of the spaces** below. Each word in the list can **only be used once or not at all**.

sun _____

card _____

light _____

Do not write
in this column

42. Based on your reading of the poem, which statement below describes how the **Eaglehawk** feels about the other animals?

Tick ☒ the **best** answer below.

He feels superior to the other animals. ☐

He feels inferior to the other animals. ☐

He is afraid of the other animals. ☐

43. Based on your reading of the poem, tick ☒ the following statements true or false.

True False

The rivers are visible because they attract insects. ☐ ☐

Eaglehawk can fly long distances to find water. ☐ ☐

Eaglehawk flies in daylight hours and at night. ☐ ☐

Do not write
in this column

44. What is **one third of £72.90**? Write your answer in the space below.

£ _____

45. Amy organises a competition. She offers **four prizes**.

Prize A: One fifth of £2500

Prize B: One tenth of £5400

Prize C: One half of £950

Prize D: One third of £1200

Look at the statements below. Tick ☒ each statement **true** or **false**.
The first one has been done for you.

	True	False
Prize A is worth £500.	☒	☐
Prize D is worth £100 less than Prize A .	☐	☐
Prize B is worth the most.	☐	☐
Prize C is worth less than Prize D .	☐	☐

46. A bag contains **balls** labelled **1, 2, 3, 4, 5** or **6**. A ball is picked at **random**. Tick ☒ the following statements **true** or **false**.

	True	False
Picking an odd number and picking an even number are equally likely .	☐	☐
Picking an odd number is less likely than picking a 2 .	☐	☐
Picking a 4 is more likely than picking a 3 .	☐	☐

47. John and Edward each write a list of numbers.

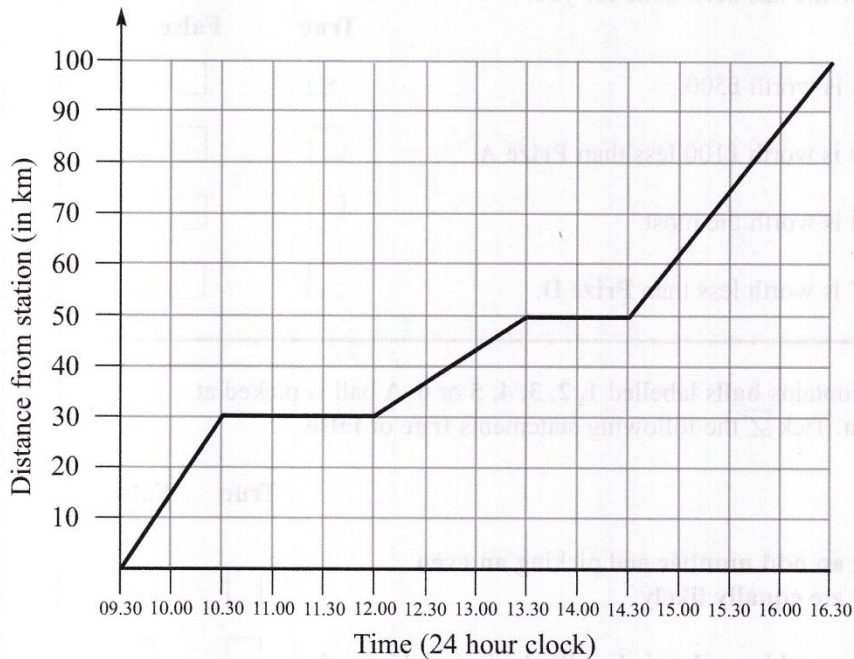
John starts with the number 12 and writes the **multiples of 12**.

Edward starts with the number 9 and writes the **multiples of 9**.

What is the **smallest number** to appear in **both lists**? Write your answer in the space below.

48. A train leaves a station at 9.30 am. The train's journey is shown on the graph below. The train makes **two stops**, one in the **morning** and one in the **afternoon**. **How long did the train stop in the afternoon?**

Give your answer in **minutes**. Write your answer in the space below.



_____ minutes

49. What is the value of **60 cm + 31 mm**? Write your answer, in **millimetres**, in the space below.

_____ mm

50. A factory makes **615 batteries**. The batteries are put into **packets**. Each **full packet** contains **6 batteries**. **How many full packets** are there? **How many batteries** are **left over**? Write your answers in the spaces below.

_____ full packets and _____ batteries left over

51. Oliver lives in **Smalltown** and wants to catch a train to **Bigtown**. The **first train** to Bigtown leaves Smalltown at **7:30 am**. **After the first train, trains leave every 20 minutes**. Oliver goes to the train station at **2:15 pm**. **What is the least time** he must wait for a train to Bigtown? Write your answer in the space below.

_____ minutes

GO STRAIGHT TO PAGE 23

Do not write
in this column

(3)

Refugee Road

The wind whistled through the skeletal branches of the trees. Monique pulled her woollen shawl tight and hunched up her shoulders, hoping to conserve what little heat she had in her body. Her feet felt like concrete blocks, a heavy burden of numbness at the end of each aching leg. She endeavoured to walk as far as possible before sunrise, for then the searing heat of the day would lead to utter exhaustion and dehydration.

Her journey, thus far, had been a long and arduous one. She had been trudging onward day after day, week after week. On the road she had encountered other travellers, many only children too; seekers of asylum, the authorities had labelled them.

The ground beneath her feet began to vibrate. A distant and familiar rumbling warned Monique to step aside, as armoured vehicle after armoured vehicle forged its way along the road. Some carried supplies for the refugee camps; other trucks carried people, soldiers in fact. Monique was aware of the miserable eyes of the young men peering out the narrow gaps along the side of the truck. She knew that the owners of those eyes had heavy hearts, weighed down by the guns and ammunition held firmly in their youthful hands. Heavy hearts burdened with memories of horrors and guilt. Children, like her. Boys though. Boy soldiers.

She had witnessed a group of these 'soldiers' playing football one day. The ragged and tattered ball, scuffing from foot to foot and the boys' screams of jubilation or frustration echoed along the road. The sounds reminded her of the small grassy area outside her village school. She should be there reading a book and those boys should be there playing, carefree under the sun's golden rays. The conflict had ended that life for them all.

Alison Brown

52. Which word in paragraph one is similar in meaning to tried?

Write your answer in the space below.

Do not write
in this column

53. Based on your reading of **paragraph one**, why does Monique **feel cold**? Tick ☒ the **best** answer below.

Her shawl is old, woollen and has holes in it. ☐

It is early morning and the sun hasn't yet risen. ☐

She is cold because she is very dehydrated. ☐

54. In paragraph **two**, **which two word** phrase tells us that **Monique has not completed her journey**? Write your answer in the space below.

55. In paragraph **three**, what **word** tells us that Monique has **encountered army trucks on the road before**? Write your answer in the space below.

56. **One** of the statements below is **true**. Based on what you have read in the **whole passage**, tick ☒ the **true** statement.

Monique is travelling because of her job. ☐

Monique is travelling because she is a soldier. ☐

Monique is travelling in an armoured vehicle. ☐

Monique is travelling because of a conflict. ☐

Do not write
in this column

57. The words **vibrate**, **armoured**, **trucks** and **firmly** are used in **paragraph three** of the passage. Tick ☒ the correct box to show whether each word is used as a **noun**, **verb**, **adverb** or **adjective**.

	noun	verb	adverb	adjective
vibrate				
armoured				
trucks				
firmly				

58. Which of the following words describes this passage? Tick ☒ the **best** answer below.

- unrealistic ☐
- disturbing ☐
- humorous ☐
- uplifting ☐

Do not write
in this column

LOOK OVER YOUR PAPER UNTIL TIME IS UP.
MAKE SURE YOU HAVE NOT MISSED A PAGE.

(3)

THIS IS A BLANK PAGE