

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

# CEA

## Common Entrance Assessment

### Paper 3

**Saturday 1 December 2012**

**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	(4)			
3	(2)			
7	(3)			
8	(3)			
9	(2)			
13	(4)			
14	(2)			
15	(2)			
19	(3)			
20	(4)			
21	(1)			
<b>TOTAL 32</b>				

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### ENGLISH

Page	Marks	Score	Check	
5	(5)			
6	(4)			
10	(1)			
11	(3)			
12	(1)			
16	(1)			
17	(6)			
18	(2)			
23	(5)			
24	(4)			
<b>TOTAL 32</b>				
<b>TOTAL SCORE</b>				

1. Each day Laura **sleeps** for **8** hours. A **day** is **24** hours. For **what fraction** of the day is she **awake**? Tick  the correct box below.

One third

Two thirds

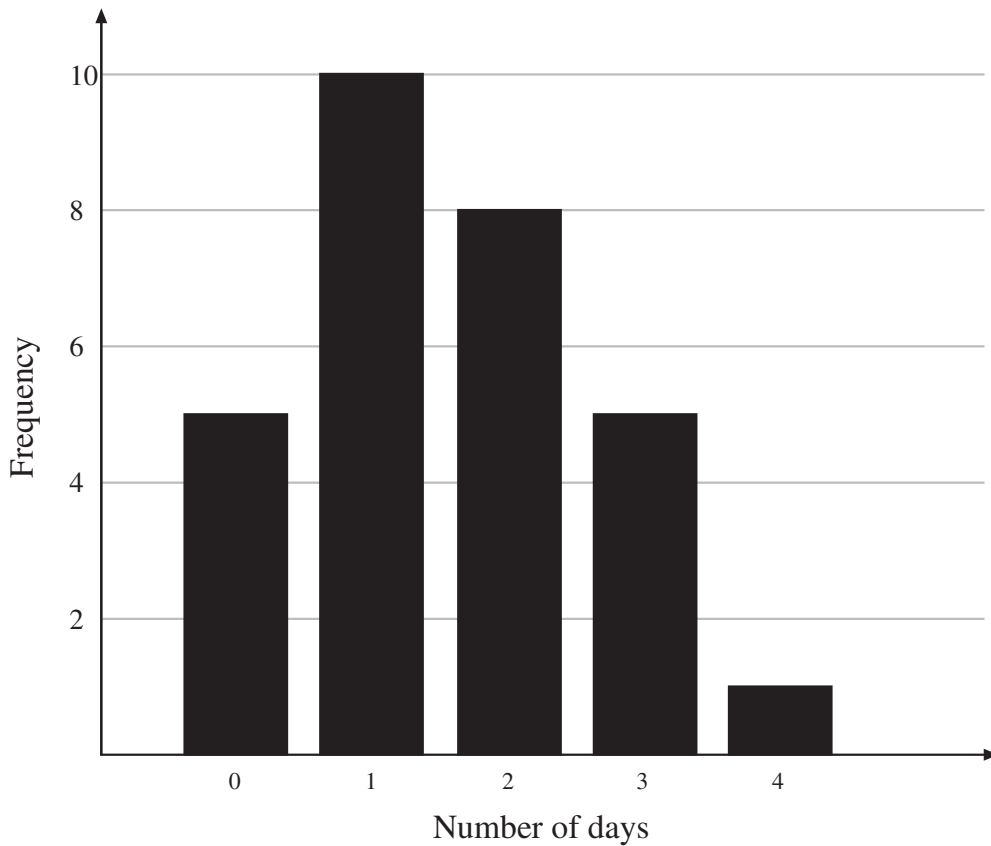
One half

One quarter

Three quarters

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2. Sarah asks her friends **how many days in a week** they eat takeaway food. The bar chart below shows the results.



**How many** friends did Sarah ask? Write your answer in the space below.

\_\_\_\_\_ friends

3. What is the **range** of answers given? Give your answer in days.  
Write your answer in the space below.

\_\_\_\_\_ days

4. A film is on **Channel 1**. Another film is on **Channel 2**. They **both finish** at the **same time**. The film on **Channel 1** lasted **150mins** and **started at 7pm**. The film on **Channel 2** lasted **120mins**. **At what time** did the film on **Channel 2 start**? Give your answer using the **12 hour clock**. Write your answer in the space below.

\_\_\_\_\_ pm

5. Look at the table below. It shows the **melting points** of **three** substances. The three melting points are given in  $^{\circ}\text{C}$ .

Substance	Melting Point $^{\circ}\text{C}$
Helium	- 270
Mercury	- 39
Oxygen	- 218

Which **substance** has the **lowest** melting point? Write your answer in the space below.

\_\_\_\_\_

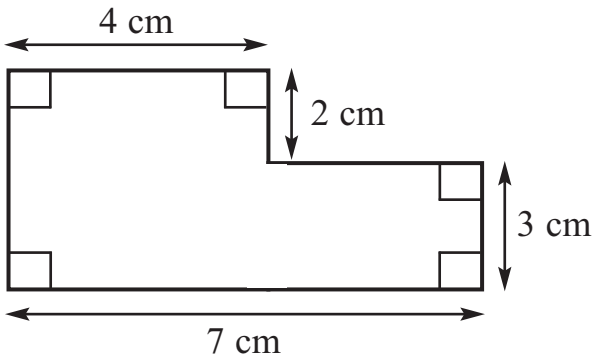
6. Room temperature is **20 $^{\circ}\text{C}$** . **How many degrees** is this **above** the melting point of **mercury**? Write your answer in the space below.

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

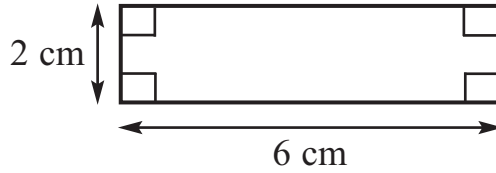
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7. Look at the shapes below

Shape A



Shape B



Find the **area** of Shape A. Write your answer in the space below.

\_\_\_\_\_ cm<sup>2</sup>

8. Look at Shape A and Shape B. **Complete the sentence below** by writing the correct **fraction** in the space provided.

The **perimeter** of Shape B is \_\_\_\_\_ of the **perimeter** of Shape A.

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## Freedom

Children wait patiently,  
watching the clock's hand  
tick slowly towards break time.  
The bell rings.

Maths books and class novels  
are discarded in the race  
to be first out the door  
and into the bustle of the playground.

School room doors burst open,  
expelling pupils in a frenzy.  
The stillness of this spring morning  
is shattered by the delighted shrieks

of children let off their lessons,  
and the pounding of trainers on tarmac.  
Balls are bounced, ropes are jumped,  
every second is savoured.

Teachers stroll to the staffroom.  
This period of release relished as much  
as the playground activities themselves.  
A seized opportunity to rest and recharge.

Through the chaos of the school yard  
the bell screams its call to class.  
Running children come to a halt mid-chase,  
laughter replaced by a chorus of sighs.

All too soon, the trudge to class begins.  
Lines snake through corridors,  
returning pupils and teachers alike  
to classrooms, learning continues

and the patient waiting  
for the clock's hand to  
tick slowly towards  
freedom once more.

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in this column

9. Look at the **three words** listed below. Find the word **opposite in meaning** to each of these words. The opposites you are looking for can be found in **verses two and three** of the poem. Write your answers in the spaces provided.

last \_\_\_\_\_

in \_\_\_\_\_

close \_\_\_\_\_

10. Look at **verse one**. **Based on your reading of the poem**, what are the children watching? Tick  the correct answer below.

The classroom clock.

The teacher gesturing.

The bell on the wall.

11. Which **word** in **verse three** of the poem tells us that the children are **happy** that the bell has rung? Write your answer in the space below.

\_\_\_\_\_

12. Look at the **three statements** below. Only **one** of the statements is **true**. **Based on your reading of the poem**, tick  the true statement.

The poem is about afternoon in a school.

The poem is about a school at break time.

The poem is about the life of a teacher.

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13. Look at **verse five** of the poem. **Based on your reading of this verse,** which of the three statements below is **true**? Tick  the **best** answer.

The teachers hurry to the staffroom at break time.

The teachers like break time as much as the pupils.

The teachers become more anxious at break time.

14. Look at **verse six**. Which **four word phrase** tells us that **the children are unhappy** that the bell has rung a second time? Write your answer in the space below.

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15. In which **season** is the poem set? Write your answer in the space below.

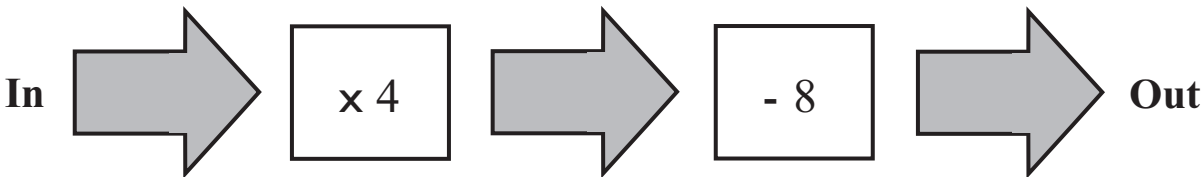
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16. In a **triangle**, **one** of the **angles** is **twice the size** of another angle. The **third** angle is a **right angle**. What size is the **smallest** angle? Write your answer in the space below.

\_\_\_\_\_ °

17. Look at the function machine below.



Use this function machine to **complete the table** below.

In	Out
10	32
12	
	0

18. John, Sam and Sean work as waiters. The table below shows how much they were paid, the **hours** they worked, and the amount they were **paid per hour**. The table has two blank spaces. **Complete the table**.

Waiter	Pay	Hours worked	Pay per hour
John	£56.00	8	£7.00
Sam	£45.50	7	
Sean	£76.50		£8.50

Do not write in this column



19. A list of 6 numbers is written in **descending** order. There are 4 numbers **missing** from the list.

\_\_\_\_\_ 10.05 \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ 6.83

Now look at the 4 numbers in the **box below**.

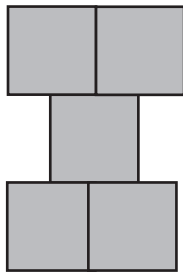
9.88	10.1	7.06	7.2
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Use all the numbers in the box to **complete the list**.  
Write the 4 **correct** numbers **in the spaces** in the list.

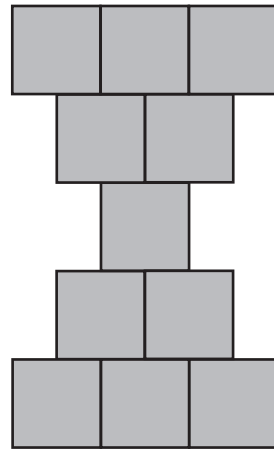
20. Patterns are formed from square tiles. The **first three patterns** in a sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

**How many** tiles are needed to make the **fourth** pattern? Write your answer in the space below.

\_\_\_\_\_ tiles

21. **How many more** tiles are needed for the **sixth** pattern **than the fifth** pattern? Write your answer in the space below.

\_\_\_\_\_ tiles

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22. There are **18 boys** and **2 girls** in a class. What **fraction of the class** is boys? Tick  the correct box below.

$$\frac{1}{9}$$

$$\frac{18}{2}$$

$$\frac{9}{10}$$

$$\frac{16}{18}$$

23. What **percentage of the class is girls**? Write your answer in the space below.

\_\_\_\_\_ %

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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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## Asthma

Asthma is a condition affecting the lungs which cannot be cured. (line 1)  
It is a common childhood condition that can be well controlled (line 2)  
in most sufferers, the severity of asthma symptoms varies between (line 3)  
children, from very mild to more severe. In the UK, over 1.1 million (line 4)  
children have asthma. It is more common in young boys than young (line 5)  
girls. However, this changes as children get older and, after puberty, (line 6)  
asthma is more common in girls. (line 7)

During the teenage years, the symptoms of asthma may disappear. (line 8)  
The cause of asthma is not fully understood. It is known that asthma (line 9)  
often runs in families and a child is more likely to have asthma if one (line 10)  
or both parents have the condition. Asthma attacks can be triggered (line 11)  
by: exercise, dust mites, animal fur, grass pollen, tree pollen, (line 12)  
tobacco smoke, and other allergens. Asthmatics airways are (line 13)  
affected by these triggers and they find it difficult to breath. (line 14)  
Do you know what to do if this happens. If you're an asthma sufferer (line 15)  
then the answer is probably yes, but what about friends and family? (line 16)

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 1

line 12

line 13

line 16

**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 15          

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

line 8           

line 10          

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 11          

line 13          

line 14          

line 16          

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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 3

line 4

line 8

line 13

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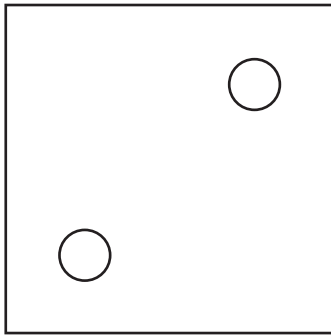
29. There are streetlights **every 20 m** along a **straight** road. What is the **distance between** the **first** and **fifth** streetlight? Write your answer in the space below.

\_\_\_\_\_ metres

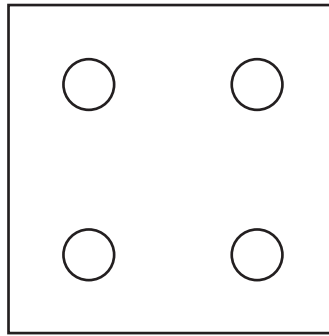
30. What is the **distance between** the **third** and **twenty-fourth** streetlight? Write your answer in the space below.

\_\_\_\_\_ metres

31. The figure below shows **2 faces** of a die. In the spaces below, write down the **number of lines of symmetry** for face A and face B.



Face A



Face B

Face A has \_\_\_\_\_ lines of symmetry.

Face B has \_\_\_\_\_ lines of symmetry.

32. Football pitches are **rectangular**. The **length** should be **at least 100** metres. The **width** should be **at least 50** metres. **What is the area** of the **smallest possible** football pitch? Write your answer in the space below.

\_\_\_\_\_ m<sup>2</sup>

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33. Bethany had **29 coins** in her purse. She had

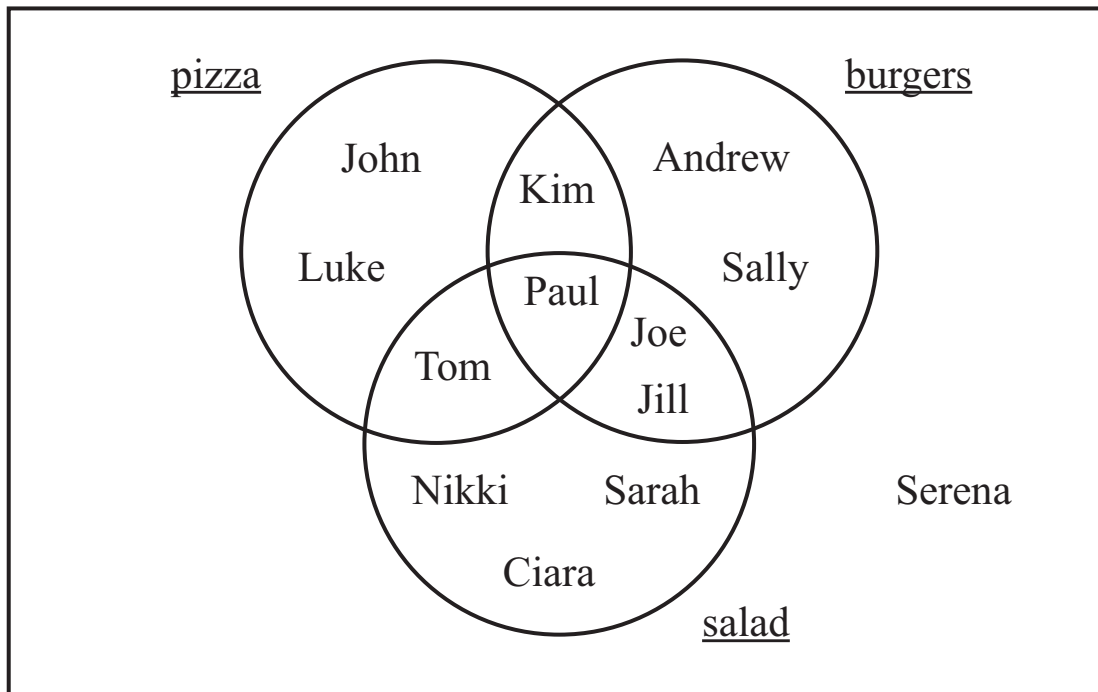
- 3    **10p** coins
- 14    **5p** coins
- 8    **2p** coins
- 4    **1p** coins

At the bank, Bethany exchanged these coins for **20p** coins. **How many 20p** coins did she get? Write your answer in the space below.

\_\_\_\_\_

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34. A class survey was carried out to find out the foods **13** different pupils enjoy. The **Venn diagram** below shows the results of the survey. Look at the **4 statements** below. Using the Venn diagram tick  **True** or **False** for each statement.



- |                                    | <b>True</b>              | <b>False</b>             |
|------------------------------------|--------------------------|--------------------------|
| <b>Sally and Joe like burgers</b>  | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Serena likes salad</b>          | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>6 people like burgers</b>       | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Sarah likes salad and pizza</b> | <input type="checkbox"/> | <input type="checkbox"/> |

35. Jane has 31 socks in a drawer. 10 socks are red, 17 socks are blue and the rest are green. She picks out a sock at random from the drawer. Look at the five outcomes below.

- Outcome A: Jane picks a red sock
- Outcome B: Jane picks a blue sock
- Outcome C: Jane picks a green sock
- Outcome D: Jane picks a black sock
- Outcome E: Jane picks a red or a green sock

Put the five outcomes in order from impossible to most likely by writing the correct letter in each of the spaces below. The outcome E has been written in for you.

\_\_\_\_\_ E \_\_\_\_\_  
 Impossible Most Likely

36. Mary has 6 friends. She asks each friend how many children there are in their family. Their answers are shown in the list below.

3 2 1 2 3 2

Mary then adds to this list the number of children in her family.

There are now 7 numbers in the new list. The range of these 7 numbers is 4. How many children are there in Mary's family? Write your answer in the space below.

\_\_\_\_\_ children

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## Expedition

Wind blows frosty, freezing breaths  
 In clouds of icy smoke,  
 Puffs lingering behind  
 Like spirits  
 Broken apart.

The frozen air so cold and crisp  
 Bites ferociously at our toes and fingertips.  
 We trudge laboriously  
 Onwards knee-deep in snow  
 Slowly slowing our steps.

A desert of snow, no horizon in sight,  
 In the distance white upon white.  
 As the day grows old, still nothing,  
 No light to dark or dark to light  
 Ever onwards morning to night.

And on we tread, on we trail  
 Our aching limbs until  
 No more the smoky breaths  
 Expelled like spirits  
 Broken apart.  
 We stop. Frozen.

37. The title of the poem is “**Expedition**”. Based on your reading of the **poem** which of the following statements **best** explains the meaning of this word? Tick  the correct answer below.

- An aimless voyage.
- A relaxing holiday.
- An arduous journey.
- A sightseeing trip.

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38. Which **word** in **verse one** is **closest in meaning** to **remaining**?  
Write your answer in the space below. **Be careful with your spelling.**

\_\_\_\_\_

39. Which verse has **some** lines which **rhyme**? Tick  the correct answer below.

verse 1           

verse 2           

verse 3           

verse 4           

40. In the **final** line of **verse two** which **word** is the **adverb**? Write your answer in the space below. **Be careful with your spelling.**

\_\_\_\_\_

41. In **verse four** which **word** is **closest in meaning** to **drag**. Write the word in the space below. **Be careful with your spelling.**

\_\_\_\_\_

42. Look at **verse three** of the poem. What phrase of **five words** is used to mean that **night is approaching**? Write your answer in the space below.

\_\_\_\_\_

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43. Based on your reading of the poem, consider each statement below and decide if it is true or false. Tick  the box to show your answer.

**True**      **False**

Walking isn't easy on the expedition.



There are ghosts following the expedition.



The snow is only a few centimetres deep.



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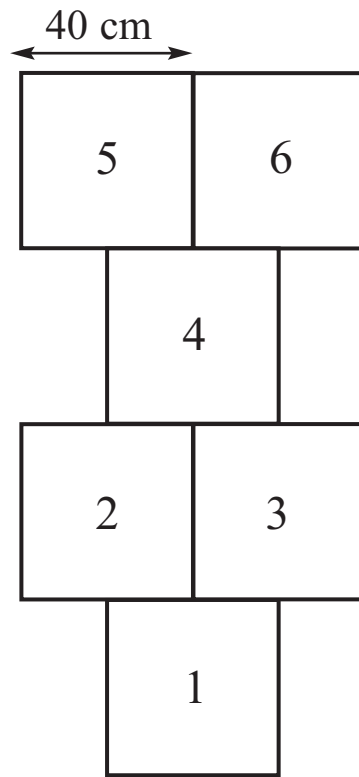
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44. A **loaf** of bread contains **20 slices** of bread. **Every day** Conor uses **2** slices to make toast and **2** slices to make a sandwich. **How many loaves** of bread does Conor use in **15 days**? Write your answer in the space below.

\_\_\_\_\_ loaves

45. Look at the diagram of a **hopscotch grid** below. It is made up of **identical squares**. Each square has a number written in it. The **length of the side of each square is 40 cm**.



What is the total **area** of the **squares** which have **odd numbers written in them**? Write your answer in the space below.

\_\_\_\_\_ cm<sup>2</sup>

46. What is the **perimeter** of the **hopscotch grid**? Write your answer in the space below.

\_\_\_\_\_ cm

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47. **5 miles is the same distance as 8 kilometres. What distance in kilometres is the same as 7.5 miles?** Write your answer in the space below.

\_\_\_\_\_ kilometres

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48. A number is a **palindrome** if it looks **the same backwards as forwards**. For example, the three numbers: 232, 16061 and 11311 are all palindromes. What is the **biggest** palindrome which is **less than 800**? Write your answer in the space below.

\_\_\_\_\_

49. **How many** palindromes are there **between 250 and 300**? Write your answer in the space below.

\_\_\_\_\_

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50. Look at the **3 statements** below about the angle  $a^\circ$ .

$a^\circ$  is an **obtuse** angle

$a$  is a **multiple of 50**

$a$  is a **multiple of 6**

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

\_\_\_\_\_  $^\circ$

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## Bully

Amy stuck her head round the classroom door and glanced cautiously around the playground before taking a guarded step out onto the battlefield. She had her target in sight. Sarah Brown: Class Bully.

Amy had had enough. She was not going to let Sarah Brown and her cronies ruin her life any more. She was sick of having her dinner money stolen; sick of the crude names they called her when they knew she could hear and sick of feeling scared to enter the playground at lunch time. Amy was going to give Sarah Brown a piece of her mind.

Unfortunately, Amy's head was a lot braver than her body. How was she going to tell Sarah Brown exactly what she thought of her if her feet wouldn't move as far as the classroom door? Her legs felt like jelly every time she lifted them and her heart beat like a drum at the mere thought of walking across the school yard.

Amy glanced back across at Sarah, surrounded by her fabulous friends, with their fabulous hair, laughing at each other's fabulous jokes. She found herself imagining what it might be like to be one of their gang, to be pretty and popular and have other people vying for her attention. Amy wasn't sure if she wanted to be part of the 'in' crowd, but she was certain she no longer wanted to be founder and sole member of the 'out' crowd!

“Oi! What you lookin' at?”

Amy came crashing back to reality just in time to see Sarah making her way across the playground towards her.

“I said, what are you lookin' at?” Sarah's voice boomed across the yard, bringing younger pupils to a standstill.

Amy panicked. There was nowhere to run, nowhere to hide. Sarah and her clan were advancing towards her, surrounding her, making escape impossible. Her heart thundered wildly in her chest. Her legs felt like they were about to buckle. Sarah was close enough now that Amy could feel the heat of her breath on her face. She saw the aggression in Sarah's eyes. There was no backing out now. She had to do something. Amy heard the words before she realised they were coming out of her mouth.

“Something ugly lookin' back!” she hollered at the top of her voice. She was in for it now...

Do not write  
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52. Look at **paragraph one** of the passage. Which **two words** in this paragraph tell us that Amy is **nervous** about going into the playground?

Tick  the **two best** words below.

cautiously

glanced

guarded

stuck

53. Which word in **paragraph two** of the passage is **closest in meaning to followers**? Write your answer in the space below.

\_\_\_\_\_

54. In **paragraph three** of the passage the writer describes Amy's legs as feeling "like jelly". A **simile** is when the writer compares one thing to another using the words '**like**' or '**as**'. What other phrase of **five or six words** in this paragraph is also a simile? Write your answer in the space below.

\_\_\_\_\_

55. Look at **paragraph four** of the passage. Which **two word** phrase tells us that Amy was the **only pupil in the 'out' crowd**? Write your answer in the space below.

\_\_\_\_\_

Do not write in this column	



56. The four words **cautiously**, **playground**, **fabulous** and **glanced** are used in the passage. Tick  the correct box to show how each one has been used.

	verb	noun	adjective	adverb
glanced				
playground				
fabulous				
cautiously				

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57. **Based on your reading of the passage**, what does Amy think about Sarah? Tick  the **best** answer below.

Amy thinks Sarah would like to spend time with her.

Amy thinks Sarah is a very caring person.

Amy thinks Sarah has an aggressive attitude.

58. In the passage we are told that Amy's "**legs were about to buckle**". What is the meaning of this phrase? Tick  the **best** answer below.

Her belt entangles her legs.

Her legs will not hold her up.

She uses her belt for defence.

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