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

CEA

Common Entrance Assessment

Paper 1

Saturday 14 November 2009

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. The **10 numbers** below show the number of electronic gadgets in the homes of 10 primary school pupils.

   5   2   8   3   8   3   5   7   7   2

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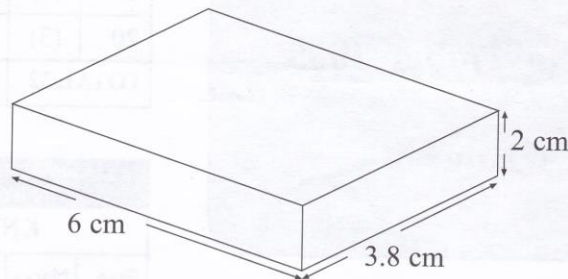
   _____ gadgets

2. Look again at the 10 numbers.
   What is the **range**?
   Write your answer in the space below.

   _____ gadgets.

3. The **cuboid** below is 6 cm by 3.8 cm by 2 cm.

   What is the **volume** of this cuboid? Write your answer in the space below.

   _____ cm^3

4.(a) What is **7:52 am** as a **24 hour clock** time? Write your answer in the space below.

   _____

   (b) What is **7:52 pm** as a **24 hour clock** time? Write your answer in the space below.
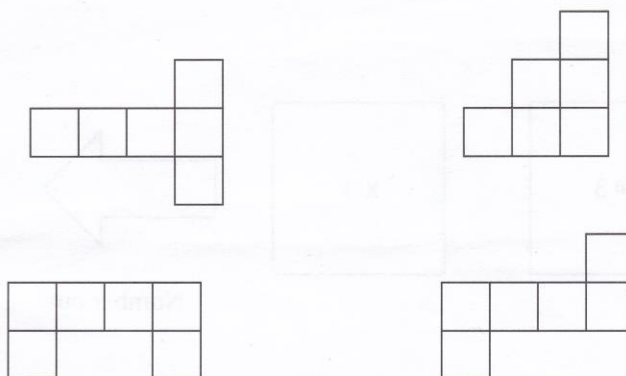
   _____

GO STRAIGHT TO PAGE 2

Do not write in this column

(4)

5. Complete the table below by putting a **fraction or a percentage** in each of the four empty boxes.

Percentage	$33\frac{1}{3}\%$		75%		20%
Fraction		$\frac{1}{2}$		$\frac{1}{4}$	$\frac{1}{5}$

6. A net of a cube can be folded to make a cube. Look at the four figures below. Circle the **two** figures that are nets of a cube.
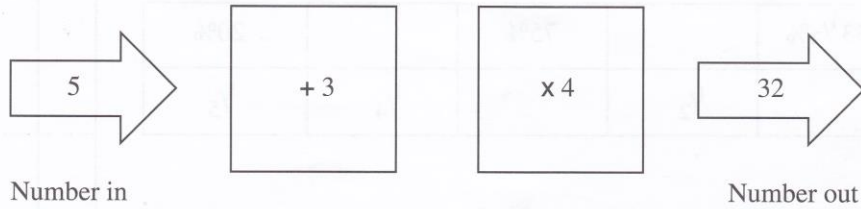
7. Look at the two calculations below. Complete each calculation by finding the **missing number**. Write your answers in the spaces below.

1642 - 647 = _____

1487 + _____ = 1642

8. Look at the function machine below.

```
5  →  | + 3 |   | x 4 |  →  32
```

Number in   Number out

Complete the two function machines below by writing the **correct number in the blank arrow.**

(a)
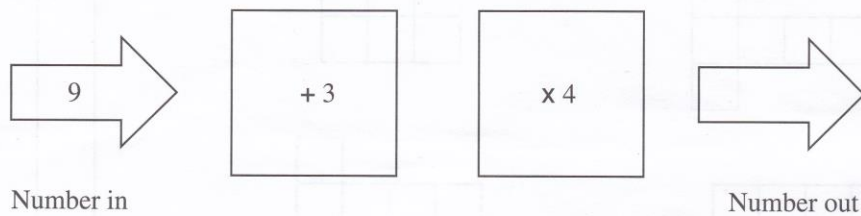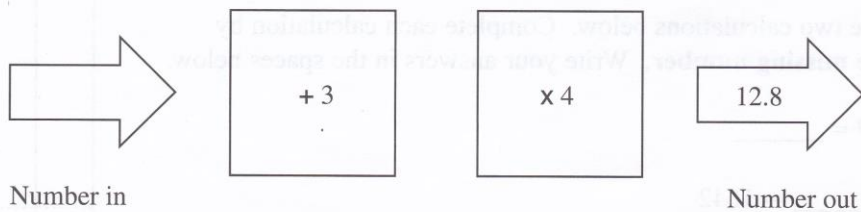
```
9  →  | + 3 |   | x 4 |  →  (blank)
```

Number in   Number out

(b)

```
(blank)  →  | + 3 |   | x 4 |  →  12.8
```

Number in   Number out

(1)

Homework! Oh, Homework!

Homework! Oh, homework!
I hate you! You stink!
I wish I could wash you
away in the sink,
if only a bomb
would explode you to bits.
Homework! Oh, homework!
You're giving me fits.

I'd rather take baths
with a man-eating shark,
or wrestle a lion
alone in the dark,
eat spinach and liver,
pet ten porcupines,
than tackle the homework
my teacher assigns.

Homework! Oh, homework!
You're last on my list,
I simply can't see
why you even exist,
if you just disappeared
it would tickle me pink.
Homework! Oh, homework!
I hate you! You stink!

Jack Prelutsky

9.   Three animals are mentioned in the poem. Write their names in the
      spaces below.

      _____   _____   _____

10.   Which of these words **best** describes the poem? Tick ☑ the best answer.

      serious   ☐

      humorous   ☐

      depressing ☐

      exciting   ☐

11. The four words **teacher**, **reminds**, **carefully** and **difficult** are used in the sentence below.

My teacher always reminds us to think carefully before answering difficult homework questions.

Tick ☑ the correct box in the table below to show which of the four words is used as a **verb**, a **noun**, an **adjective** or an **adverb** in the sentence.

	verb	noun	adjective	adverb
teacher				
reminds				
carefully				
difficult				

12. Write the **past tense** of the following words in the spaces below. Be careful with your spelling. The first has been done for you.

assign   assigned

wash   _____

explode   _____

give   _____

stink   _____

13. Look at the **last verse** of the poem. Find the **phrase of four or five words** that is closest in meaning to the words: **I would be delighted.**

Write the phrase in the space below.

_____

(5)

14. The last line of the second verse of the poem uses the word **assigns**. Look at the four statements below. Tick ☑ the box opposite the correct statement. Only **one** of the statements is correct.

When my teacher **assigns** a homework, it means that:

she writes her name at the end of the homework ☐

she keeps a record of each pupil's homework mark ☐

she asks each pupil to mark their partner's homework ☐

she tells the pupils what they must do for homework ☐

15. Find the **word** in the poem closest in meaning to each of the following. Write your answer in the space below.

having a nasty smell _____

blow up _____

vanished from sight _____

Page 7

16. (a) The temperature in Belfast is **3°C**.
The temperature in Glasgow is **8°C lower** than in Belfast.

What is the temperature in Glasgow?
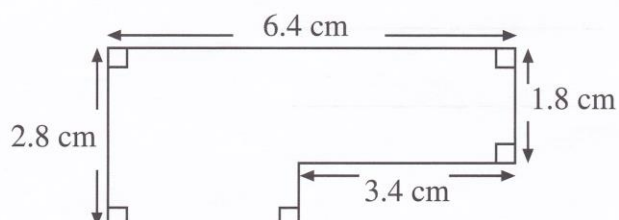Write your answer in the space below.

_____ °C

(b) The temperature in Edinburgh is **- 4°C**.
The temperature in Dresden is **7°C lower**.

What is the temperature in Dresden?
Write your answer in the space below.
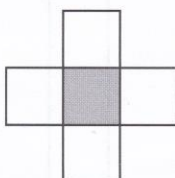
_____ °C

17. Look at the shape below.

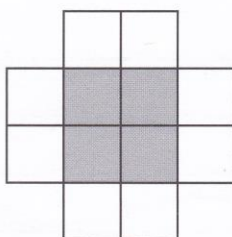Find the **perimeter** of the shape. Write your answer in the space below.

_____ cm

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(2)

18. Look at the sequence of three patterns below. Each pattern is made up
of shaded and unshaded squares. For example, **pattern 2** has **4 shaded**
squares and **8 unshaded** squares.

Pattern 1   Pattern 2   Pattern 3

Look at the table below for the number of **unshaded** squares in each pattern.

Pattern	1	2	3
Unshaded squares	4	8	12

How many **unshaded** squares are there in **pattern 7**? Write your answer in
the space below.

_____ unshaded squares
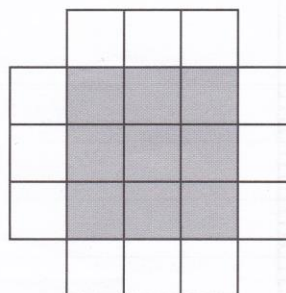
19. Look at the table below for the number of **shaded** squares in each
pattern.

Pattern	1	2	3
Shaded squares	1	4	9

How many **shaded** squares are there in **pattern 8**? Write your answer in the
space below.

_____ shaded squares

(2)

20. Nora's pet hamster is ill. The vet tells Nora to give the hamster water each day. Nora must keep a record of the amount of water the hamster drinks each day. Nora draws the graph below. The graph shows how many millilitres of water the hamster drinks over 5 days.
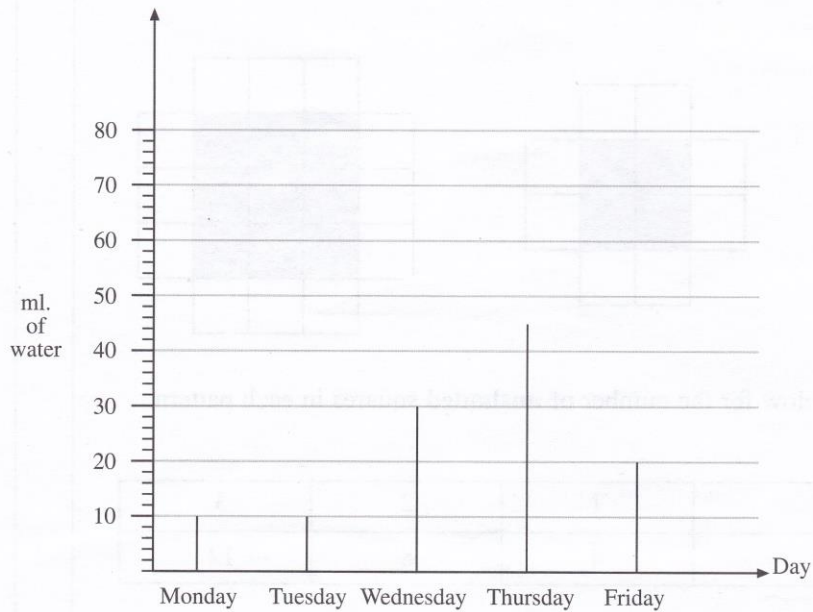
(a) The hamster had more water to drink on Friday than on Monday.
How much more? Write your answer in the space below.

_____ ml

(b) On what **day** did the hamster drink the **greatest** amount of water?
Write your answer in the space below.

_____

21. Over two **consecutive** days there is a **50% increase** in the amount of water the hamster drinks. Write the two days in the spaces below.

_____ and _____

(2)

22. Write a number in the box below that makes the statement true.

15 is ☐ % of 60

23. An ice skater spins on the ice. She **turns $3\frac{1}{2}$ times** before stopping.
How many degrees has she turned?
Write your answer in the space below.

_____ °

(2)

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

A missed bin collection

Dear Sir,

I am a schoolboy and this is the first letter I've ever written. (line 1)
I am writing to ask you to collect our bin on the day you say (line 2)
you will, Last week our bin wasn't collected. This made (line 3)
my mum furious and she is more strict on days when shes (line 4)
furious. (line 5)

A foul smell is coming from our bin. My mum tells me that (line 6)
bins can be a health hasard and that I shouldn't play near (line 7)
smelly bins. She says that if bins are pushed over they (line 8)
can attract rats. Can you see my problem. I want to play (line 9)
in our alley, but I don't want to disobey my mum. (line 10)

I'm writing this letter because my mum's to polite to complain. (line 11)
But my uncle Peter says, "You don't get if you don't ask" and (line 12)
so I'm asking you to send someone to collect our bin. If you (line 13)
do as I ask, I promise I'll never write to you again. (line 14)

Yours faithfully,
Gerard Hiddick

24. Each line of the passage is numbered. A question mark is needed instead of a full stop on one line of the passage. Tick ☑ the number of the line in which the question mark is needed.

line 6 ☐

line 8 ☐

line 9 ☐

line 13 ☐

Do not write in this column

(1)

25. 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 10   ☐

     line 12   ☐

     line 14   ☐

26. 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 8   ☐

     line 12   ☐

27. A word has been used incorrectly in the passage. Tick ☑ the number of
     the line containing the incorrect word.

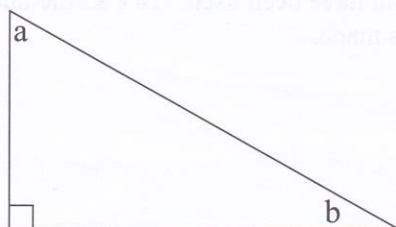   line 1   ☐

     line 6   ☐

     line 10   ☐

     line 11   ☐

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

     line 5   ☐

     line 7   ☐

     line 9   ☐

     line 12   ☐

(4)

29. Look at the right-angled triangle below.

a

b

Tick ☑ the statements below that are **true:**

angle **a** and angle **b** add to make 180º ☐

angle **a** and angle **b** are both acute angles ☐

angle **a** and angle **b** add to make 90º ☐

30. Look at the triangular prism below.
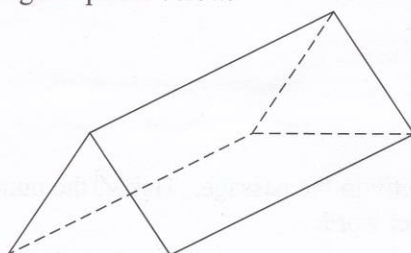
Write the correct number in each of the spaces below.

The triangular prism has _____ **faces**.

The triangular prism has _____ **vertices**.

31. Look at the numbers below.
Tick ☑ the number in which **3 stands for 3 units.**

400.03 ☐

403.2 ☐

502.3 ☐

231.2 ☐

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(3)

32. Work out the cost of **20 cm** of ribbon at £3.80 **per metre**.
Write your answer in the space below.

_____ pence

33. A custard cream weighs **24 grams**. Only $33^1/_3\%$ of its weight is cream.
How many **grams** of cream are in **50 custard creams**?
Write your answer in the space below.

_____ g

34. Fergus has to **fill** bags with sand from a container. **The container** holds
$3^1/_3$ **kg** of sand. **Each bag** holds $\frac{1}{4}$ **kg** of sand. How many full bags of
sand can Fergus get from the container? Write your answer in the space
below.

_____ bags

35. Four types of bottle are used to store wine.

Bottle **A** holds **1.58 litres**.
Bottle **B** holds **1.7 litres**.
Bottle **C** holds **742 ml**.
Bottle **D** holds **1628 ml**.

Arrange the bottles **in order** from the bottle that holds the **smallest** amount of
wine to the bottle that holds the **greatest** amount. **Write a letter** in each of
the spaces below to show the correct order of the bottles. The bottle holding
the smallest amount of wine has been done for you.

C

_____   _____   _____   _____
(smallest)   (greatest)

36. A family goes on a long journey. Their car uses **9.7 litres** of petrol **each
hour**. If the family travels for **8 hours**, how many litres of petrol does
the car use? Write your answer in the space below.

_____ litres

(5)

The Gingerbread Man

The gingerbread man gave a gingery shout:
"Quick! Open the oven and let me out!"
He stood up straight in his baking pan.
He jumped to the floor and away he ran.
"Catch me," he called, "if you can, can, can."

The gingerbread man met a cock and a pig
And a dog that was brown and twice as big
As himself. But he called to them all as he ran,
"You can't catch a runaway gingerbread man."

The gingerbread man met a reaper and sower.
The gingerbread man met a thresher and mower;
But no matter how fast they scampered and ran
They couldn't catch up with a gingerbread man.

Then he came to a fox and he turned to face him.
He dared Old Reynard to follow and chase him;
But when he stepped under the fox's nose
Something happened. What do you s'pose?
The fox gave a snap. The fox gave a yawn,
And the gingerbread man was gone, gone, GONE.

Rowena Bennett

37. Find the **word** that goes at the end of the eight words below to make a
true sentence of nine words.

The gingerbread man spends much of the poem

Tick ☑ the **best** answer.

singing ☐

cooking ☐

eating ☐

running ☐

(1)

38. What is a gingerbread man? Tick ☑ the **best** answer.

a person ☐

a biscuit ☐

an animal ☐

a reaper ☐

39. These five words are not in alphabetical order:

dotty   discovery   discrete   discontinue   catalogue

Write the words in alphabetical order in the space below. The first word has been done for you.

catalogue _____

40. In the final verse the word **s'pose** is used. Write the word without the apostrophe and using all its letters. Write your answer in the space below.

_____

41. Find the **word** in the **third verse** of the poem that means **dashed about playfully**.

Write your answer in the space below.

_____

42. Which **line** of the **final verse** of the poem tells us that the gingerbread man challenged the fox to pursue him? Write the line in the space below.

_____

43. **According to the poem**, **one** of these four statements is **true**.
Tick ☑ the true statement.

the dog in verse two was twice as big as the pig ☐

the dog in verse two was twice as big as the cock ☐

the dog was twice as big as the gingerbread man ☐

the dog was twice as big as itself ☐

(1)

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

	True	False
all four sides of a square have the same length	☐	☐
the three angles of a triangle add up to 360°	☐	☐
all the angles of an isosceles triangle are the same	☐	☐
opposite sides of a parallelogram are equal in length	☐	☐

45. Look at the five fractions below

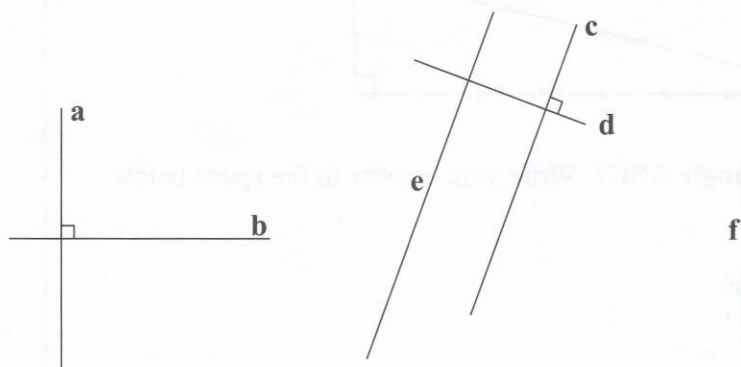$$\frac{5}{12} \qquad \frac{1}{36} \qquad \frac{2}{18} \qquad \frac{4}{9} \qquad \frac{5}{6}$$

Claire writes these fractions **in order** from smallest to largest.
Which fraction will be the **middle fraction** when Claire writes them
in order? Write your answer in the space below.

_____

46. Look at the lines marked **a**, **b**, **c**, **d**, **e** and **f** drawn in the
figure below.
Line **c** is **parallel** to line **e**, and line **a** is **parallel** to line **f**.

Tick ☑ each of the statements below true or false.

|	True	False
line **a** is **perpendicular** to line **b**	☐	☐
line **a** is **parallel** to line **e**	☐	☐
line **d** is **perpendicular** to line **e**	☐	☐
line **b** is **perpendicular** to line **f**	☐	☐

(3)

47. Michael and Susan agreed to share the cost of a video game. The game cost **£27.60**. **Michael paid 25%** of the cost. **How much did Susan pay**? Write your answer in the space below.

£ _____

48. Look at the square below. Each of its sides is 8 cm long. A triangle ABC is drawn in the square.
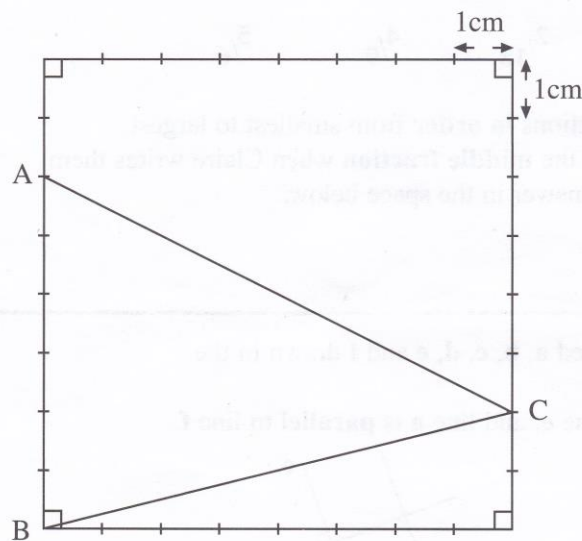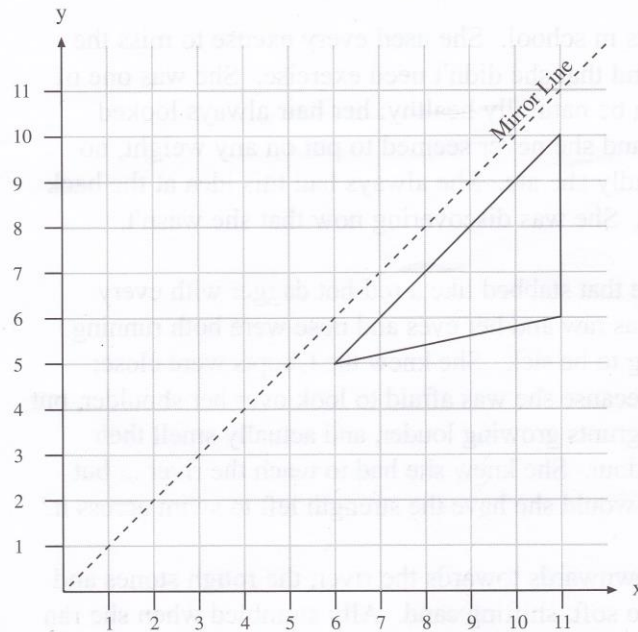

What is the **area** of the **triangle ABC**? Write your answer in the space below.

_____ cm^2

(2)

49. In the figure below there is a triangle and a mirror line.

The triangle is reflected in the mirror line and a **new triangle** is formed.
What are the **coordinates** of the **three vertices** of the **new triangle**? Write
your answers in any order in the spaces below.

(,)   (,)   (,)

50. A map has the following scale:

1 centimetre represents 5 kilometres.

Two towns are **5.8 centimetres** apart **on the map**. What is the **actual
distance** between the towns? Write your answer in the space below.

_____ km

51. Two churches are **27.5 kilometres** apart.
How far apart are the churches **on the map**?
Write your answer in the space below.

_____ cm

(3)

Windlord

Ally had always hated sports in school. She used every excuse to miss the
class, and she liked to pretend that she didn't need exercise. She was one of
those people who seemed to be naturally healthy: her hair always looked
shining, her skin was clear and she never seemed to put on any weight, no
matter how much or how badly she ate. She always had this idea at the back
of her mind that she was fit. She was discovering now that she wasn't.

There was a stitch in her side that stabbed like a red-hot dagger with every
breath she took, her throat was raw and her eyes and nose were both running.
She was afraid she was going to be sick. She knew the Chopts were close;
she didn't know how close because she was afraid to look over her shoulder, but
she could hear their panting grunts growing louder, and actually smell their
musty, vaguely unpleasant odour. She knew she had to reach the river ... but
even if she reached the river would she have the strength left to swim across it?

The rocky ground sloped downwards towards the river, the rough stones and
grit gradually giving away to soft, shifting sand. Ally stumbled when she ran
onto the beach, the sands seeming to clutch at her feet. She staggered on for a
dozen more steps before she actually fell, the tips of her fingers splashing into
the river's icy water. Behind her the beasts howled in triumph.

Michael Scott

52. **Two of Ally's senses** tell her that the Chopts are getting closer.
Tick ☑ the two senses.

seeing ☐

hearing ☐

smelling ☑

tasting ☐

touching ☐

53. What **word** in the final paragraph tells us that when Ally fell, the Chopts
were confident that she wouldn't escape? Write the word in the space
below.

_____

(2)

According to the passage, only **one** of the statements below is correct. Tick ☑ the correct statement.

Even if Ally could outrun the Chopts, she might still be in danger because

she might not have enough energy left to swim across the river ☐

she might cut the soles of her feet on the rough stones and grit ☐

she might be unable to survive in the river's icy cold water ☐

she might be unable to keep her balance in the soft, shifting sand ☐

5. The passage mentions creatures called Chopts. **Using only the information in the passage,** tick ☑ the statement that **best** describes the Chopts.

Chopts are members of the wolf family ☐

Chopts can't move quickly on sand ☐

Chopts can't swim ☐

Chopts are nasty creatures ☐

6. Find the **three or four word phrase** in the final paragraph which is closest in meaning to **being replaced by**. Write the phrase in the space below.

_____

57. What **two verbs** tell us that before she fell, Ally wasn't running smoothly on the beach? Write your answers in the spaces below.

_____   _____

58. What **phrase** used in the **first paragraph** of the passage means **to be conscious of** or **to believe**? You may use **between six and eleven words** in your phrase. Write your answer in the space below.

_____

LOOK OVER YOUR PAPER UNTIL TIME IS UP.

(6)