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

CEA

Common Entrance Assessment

Paper 2

Saturday 28 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

NOT TO BE FILLED IN BY THE PUPIL

MATHEMATICS

Page	Marks	Score	Check	
1	(2)			
2	(2)			
3	(2)			
4	(2)			
8	(2)			
9	(4)			
10	(2)			
13	(2)			
14	(2)			
15	(4)			
19	(2)			
20	(2)			
21	(4)			
TOTAL 32				

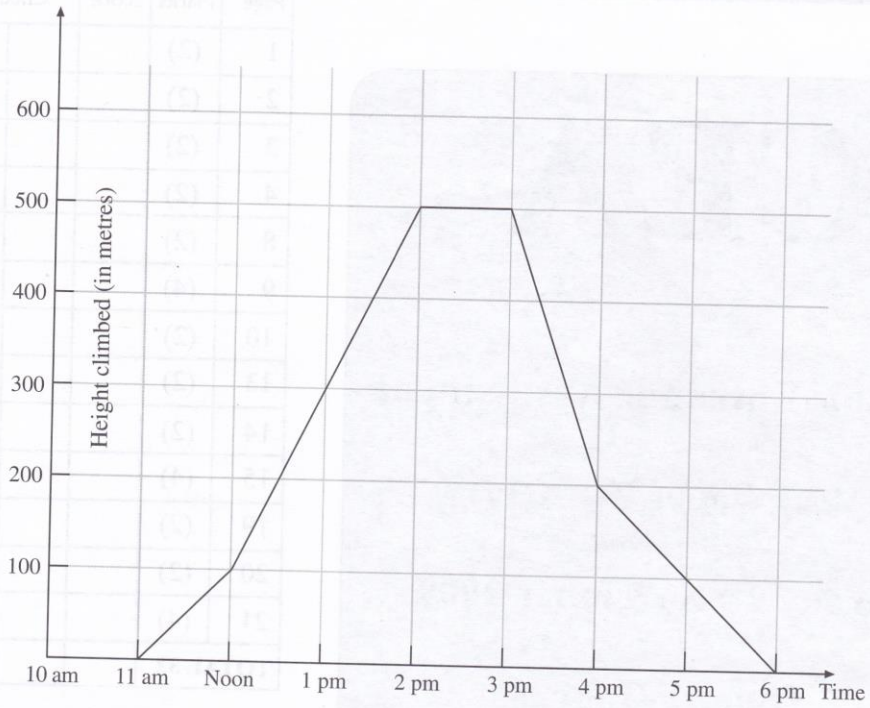
NOT TO BE FILLED IN BY THE PUPIL

ENGLISH

Page	Marks	Score	Check	
6	(6)			
7	(2)			
11	(1)			
12	(4)			
17	(6)			
18	(4)			
22	(3)			
23	(5)			
24	(1)			
TOTAL 32				
TOTAL SCORE				

Do not write in this column

1. A small animal climbs up to the top of a hill and then makes his way back to ground level. The graph below shows the animal's height above ground level at certain times of the day.



(a) **How high** has the animal climbed at 1 pm? Write your answer in the space below.

_____ metres

(b) **At what time** did the animal arrive back at **ground level**? Write your answer in the space below.

_____ pm

2. Jennifer is facing **North**. She **turns through 45°**. In which direction is she now facing? There are **two** possible correct answers. Write your answers in the spaces below.

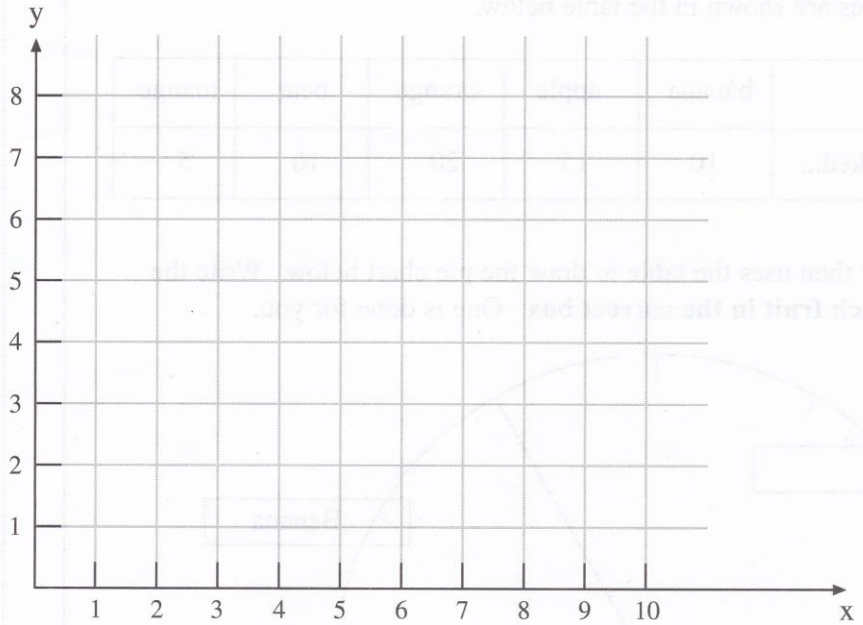
_____ _____

(2)

GO STRAIGHT TO PAGE 2

Do not write in this column

3. Look at the grid below.



(a) **Plot the points** (1 , 4), (8 , 4) and (8 , 1) on the grid.

(b) When a **fourth point** is added to the grid, the four points can be joined to form a **rectangle**. **Write the coordinates** of the fourth point in the space below.

_____

4. What time is **5 hours and 22 minutes earlier than noon**?
Write your answer using the **12 hour clock** (am/pm), in the space below.

_____

GO STRAIGHT TO PAGE 3

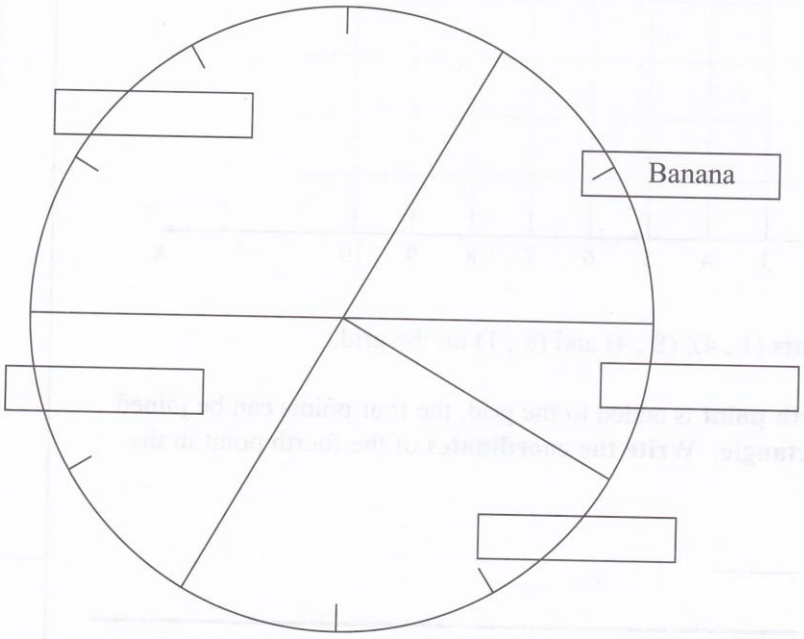
(2)

Do not write in this column

5. A teacher is carrying out a survey about healthy eating in school.
She asks **60 pupils** to choose the fruit they like best.
Their choices are shown in the table below.

	banana	apple	orange	pear	mango
Number who liked...	10	15	20	10	5

The teacher then uses the table to draw the pie chart below. Write the **name of each fruit in the correct box**. One is done for you.



6. A school pays for:

25 pens at **40 pence** each
130 rulers at **60 pence** each
and **4 notebooks** at **50 pence** each.

Find the **total amount** the school will have to pay.
Write your answer in the space below.

£ _____

(2)

GO STRAIGHT TO PAGE 4

Do not write in this column

7. Complete the following calculations. Write your answers in the spaces below.

24 ÷ 10 = _____

257 ÷ 100 = _____

42.7 ÷ 10 = _____

8. Look at the number below.

5.74

What is the value of the **7 digit** in this number?
Tick ☑ the correct box below.

- seven hundreds ☐
- seven tens ☐
- seven units ☐
- seven tenths ☐
- seven hundredths ☐
- seven thousandths ☐

(2)

GO STRAIGHT TO PAGE 5

My Brother Bert

Pets are the hobby of my brother Bert.
He used to go to school with a mouse in his shirt.

His hobby it grew, as some hobbies will,
And grew and GREW and GREW until -

Oh don't breathe a word, pretend you haven't heard.
A simply appalling thing has occurred -

The very thought makes me iller and iller:
Bert's brought home a gigantic gorilla!

If you think that's really not such a scare,
What if it quarrels with his grizzly bear?

You still think you could keep your head?
What if the lion from under the bed

And the four ostriches that deposit
Their football eggs in his bedroom closet

And the aardvark out of his bottom drawer
All danced out and joined in the roar?

What if the pangolins were to caper
Out of their nests behind the wallpaper?

With the fifty sorts of bats
That hang on his hatstand like old hats,

And out of a shoebox the excitable platypus
Along with the ocelot or jungle-cattypus?

The wombat, the dingo, the gecko, the grampus -
How they would shake the house with their rumpus!

Not to forget the bandicoot
Who would certainly peer from his battered old boot.

Why it could be a dreadful day,
And what, oh what, would the neighbours say!

Ted Hughes

Do not write in this column

GO STRAIGHT TO PAGE 6

Do not write in this column

9. **Three** of the creatures from Bert's collection have names **beginning with a vowel**. Write the name of each in the space below.

_____ _____ _____

10. **Based on your reading of the poem**, which of the statements below **best describes Bert's platypus**? Tick ☑ the **best** answer.

very obedient ☐

long-tailed ☐

slow moving ☐

easily agitated ☐

11. The poet is afraid that **two** of Bert's animals will fight. Name the two animals. Write your answers in the spaces below.

_____ and _____

12. The poet tells us that Bert's hobby is getting out of control. He wants us to keep this fact a secret. In which **verse** of the poem does the poet ask that Bert's hobby be kept a secret? Tick ☑ the correct box below.

verse 1 ☐

verse 2 ☐

verse 3 ☐

verse 4 ☐

13. **Ladies** is the **plural** form of the singular noun **lady**.
Write the **singular** form of each of the following plural nouns. Take care with your spelling. Write your answer in the space provided.

pigs _____

cattle _____

geese _____

oxen _____

GO STRAIGHT TO PAGE 7

(6)

14. In **verse 12** of the poem the word **rumpus** is used. What is the meaning of rumpus? Tick ☑ the **best** answer.

a rumpus is an animal's grunting noise ☐

a rumpus is a disruptive commotion ☐

a rumpus is an animal's hindquarters ☐

15. When Bert adds one particular animal to his collection, his brother feels sick. Which animal? Give your answer by ticking ☑ the correct box below.

gorilla ☐

aardvark ☐

lion ☐

grizzly bear ☐

Do not write in this column

(2)

Do not write in this column

16. In a dancing competition Sean has to dance **20 times**. Each dance is scored out of 10 marks. In the box below are the marks awarded to Sean by one of the judges.

5	2	8	9	3
4	4	5	6	1
2	5	8	6	8
1	7	7	5	8

The **frequency table** below is to be used to show the marks awarded by the judge. Complete the table by writing the correct number in each of the boxes below.

Sean's score	Frequency
1 - 3	☐
4 - 6	☐
7 - 9	☐

17. The statements below are about three dimensional solid objects. Tick ☑ each of the statements below **true** or **false**. The first one is done for you.

	True	False
A cube has 6 faces	☑	☐
A cylinder has 2 flat faces and 1 curved face	☐	☐
A cube has 6 vertices	☐	☐
A triangular prism has 9 edges	☐	☐

GO STRAIGHT TO PAGE 9

(2)

Do not write in this column

18. A train travels **2 kilometres**. A second train travels **48 metres further**. How far does the second train travel? Circle the correct answer below.

248m 50m 2.48km 50km 2048m

19. Look at the two numbers below.

0.8 **0.74**

Multiply the **larger** of the two numbers by 100.

Write your answer in the space below.

_____

20. Write the number **sixty and one quarter** as a **decimal number**.

Write your answer in the space below.

_____

21. Complete each number statement below by writing the correct number in the box.

(a) $\frac{2}{7}$ of 56 is ☐

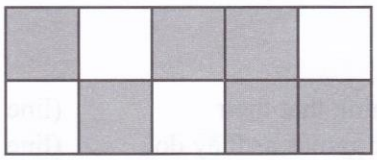
(b) 8 is $\frac{2}{5}$ of ☐

(4)

GO STRAIGHT TO PAGE 10

Do not write in this column

22. The rectangle below is divided into squares of equal area.



What **percentage** of the rectangle is shaded?

Write your answer in the space below.

_____ %

23. In St. Petersburg the temperature is **-17°C**. The temperature in Belfast is **22°C higher**. What is the temperature in Belfast? Write your answer in the space below.

_____ °C.

(2)

The passage you are about to read contains four errors and a missing word. Read the passage and then answer the questions that follow it.

Do not write in this column

Children have never had it so good

A survey of parents found that 84% think that their (line 1)
children learn as much from computer games as they do (line 2)
from their teacher. They believe theres more fun in (line 3)
the learning that takes place in modern classrooms. (line 4)

Parents are impressed by the "Brain Training" games (line 5)
that make the learning of multiplication tables and (line 6)
arithmetic so much fun. They can see the enjoyment (line 7)
on the faces of their children when they play these games. (line 8)
It's clear for all to see. These games weren't around when (line 9)
they were young. In those days, children had to _____ (line 10)
more on their teacher. Learning wasn't thought of as (line 11)
something that could be fun. No electronic device existed (line 12)
to measure "brain age" when these parents where at school. (line 13)

While computer games can make learning fun, parents (line 14)
regected the idea that computers could ever take (line 15)
the place of the teacher. How could a computer mark (line 16)
homeworks or keep order in class. Nevertheless, the (line 17)
parents thought teachers should make learning more (line 18)
enjoyable in order to compete with the computer (line 19)
games of the future. (line 20)

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

line 1 ☐

line 12 ☐

line 15 ☐

line 19 ☐

(1)

Do not write in this column

25. 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 5 ☐

line 15 ☐

line 17 ☐

26. A question mark is needed instead of a full stop in one of the lines of the passage. Tick ☑ the number of the line where the question mark is needed.

line 4 ☐

line 8 ☐

line 12 ☐

line 17 ☐

27. A word has been used incorrectly in the passage. Tick ☑ the number of the line where the error was made.

line 1 ☐

line 9 ☐

line 13 ☐

line 18 ☐

28. Look at the four words below. Choose the **best** word to fill the gap in line 10. Tick ☑ **one** of the boxes below to show your choice.

depended ☐

rely ☐

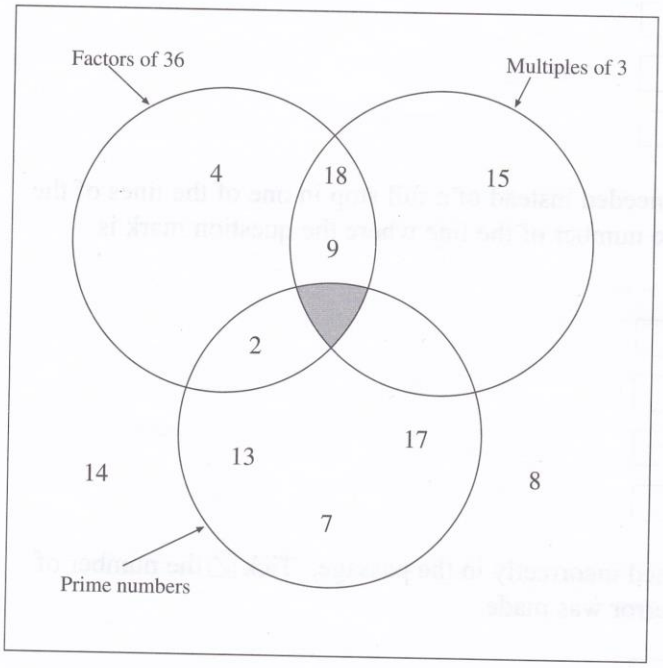
need ☐

learn ☐

(4)

Do not write in this column

29. Eileen is drawing a Venn diagram. She is putting the **whole numbers from 1 to 20** into three sets. Each set is shown as a circle. The **factors of 36** are in one circle, the **multiples of 3** are in another circle, and the **prime numbers** are in a third circle. **Some of** the numbers from 1 to 20 are shown on the Venn diagram below.



Which number should Eileen put in the **shaded** section of the Venn diagram?
Write your answer in the space below.

_____

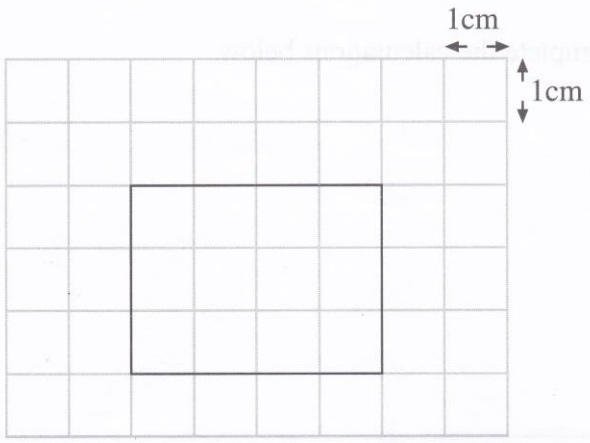
30. Look at the statements below. Tick ☑ each statement **true** or **false**.
The first is done for you.

	True	False
$\frac{1}{8}$ of a complete turn is an acute angle	☑	☐
$\frac{3}{8}$ of a complete turn is an obtuse angle	☐	☐
$\frac{5}{8}$ of a complete turn is more than 3 right angles	☐	☐

(2)

GO STRAIGHT TO PAGE 14

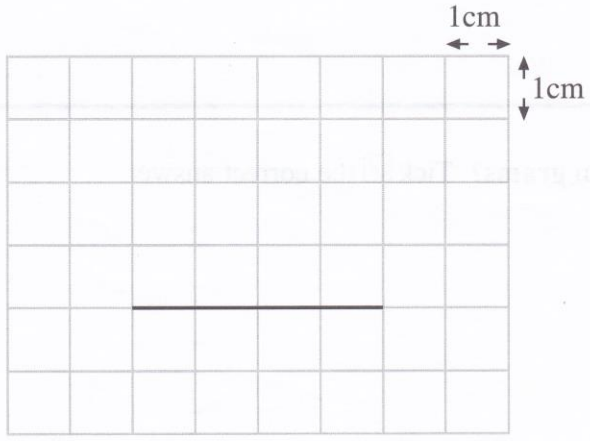
31. Look at the grid below. It is made up of small squares. The side of each small square is 1 cm long. A **rectangle** is drawn on the grid.



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

_____ cm^2

32. Look at the grid below. It is made up of small squares. The side of each small square is 1 cm long. A **line of length 4 cm** is drawn on the grid. This line is **one side** of a **rectangle of area 10 cm^2**. Draw the other **three sides** of the rectangle in the grid. Draw your lines **clearly** and **accurately**.



GO STRAIGHT TO PAGE 15

(2)

Do not write in this column

Do not write in this column

33. Look at the three calculations below.

38 x 14 = 532 **54 x 12 = 648** **148 ÷ 4 = 37**

Use these to help you complete the calculations below.

76 x 14 = _____

54 x 24 = _____

19 x 14 = _____

148 ÷ 2 = _____

34. What are the values of **a** and **b** in the calculations below?
Write your answers in the spaces provided.

716 - **a** = 125 **a** = _____

108 ÷ **b** = 9 **b** = _____

35. Find the missing number in the calculation below.

Write your answer in the box provided.

☐ ÷ 6 = 7.2

36. What is 6.25 kilograms in **grams**? Tick ☑ the correct answer.

0.625 g ☐

6250 g ☐

625 g ☐

0.00625 g ☐

(4)

GO STRAIGHT TO PAGE 16

Do not write in this column

On killing a tree

It takes much time to kill a tree,
Not a simple jab of the knife
Will do it. It has grown
Slowly consuming the earth,
Rising out of it, feeding
Upon its crust, absorbing
Years of sunlight, air, water,
And out of its leprous hide
Sprouting leaves.

So hack and chop
But this alone won't do it.
Not so much pain will do it.
The bleeding bark will heal
And from close to the ground
Will rise curled green twigs,
Miniature boughs
Which if unchecked will expand again
To former size.

No,
The root is to be pulled out -
Out of the anchoring earth;
It is to be roped, tied,
And pulled out - snapped out
Or pulled out entirely,
Out from the earth-cave,
And the strength of the tree exposed,
The source, white and wet,
The most sensitive, hidden
For years inside the earth.

Then the matter
Of scorching and choking
In sun and air,
Browning, hardening,
Twisting, withering,

And then it is done.

Gieve Patel

GO STRAIGHT TO PAGE 17

Do not write in this column

37. Circle the **best word** or **best pair of words** to complete the sentence below.

In the poem the author describes how a branch leaf tree twig will change colour become shorter scream die if it is pulled out of the earth roots branch lake.

38. In the **second verse** the poet talks about the tree as if it was a person. For example, the poet describes the tree's bark as **bleeding**. Find **two other words** in the **second verse** where the author talks about the tree as if it was a person. Write your answers in the spaces below.

_____ _____

39. Look at the **first verse** of the poem. For each of the phrases below find the **word** in the first verse which is **closest in meaning** to the phrase. Write the word in the space provided.

thick skin of an animal _____

the hard outer part of bread _____

disfigured and gnarled _____

40. **According to the poem**, to kill a tree, what must you do after you've uprooted the tree? Tick ☑ the **best** answer.

jab it with a knife ☐

expose it to the sun and air ☐

hack and chop its bark ☐

(6)

Do not write in this column

41. Look at the **third verse** of the poem. Which **word** is used to show that the **earth holds the tree firmly in place**? Tick ☑ the **best** answer.

anchoring ☐

pulled ☐

roped ☐

tied ☐

42. The words **kill**, **leprous**, **slowly** and **tree** are used in the poem. Tick ☑ the correct box to show whether each word is a **noun**, **verb**, **adverb** or **adjective**.

	noun	verb	adverb	adjective
kill				
leprous				
slowly				
tree				

43. Look at the **first verse of the poem**. In this verse, the poet uses a **phrase** of **only three words** to suggest that the earth in which the tree grows is food for the tree. Write the phrase in the space below.

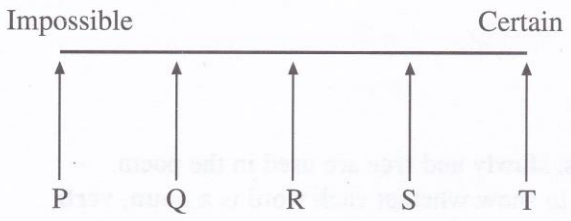
_____

(4)

Do not write in this column

44. A bag contains **20 balls**. There are **10 red** balls, **5 black** balls and **5 blue** balls. It is not possible to see into the bag.

Look at the probability line below. The letters P, Q, R, S and T show equally spaced positions on the probability line.



A pupil puts her hand in the bag and chooses a ball. Each statement below can be completed by **choosing a letter**. Complete each statement using a letter from the probability line. The first has been done for you.

Arrow **P** shows the probability that a **pink** ball is chosen.

Arrow _____ shows the probability that a **red** ball is chosen.

Arrow _____ shows the probability that a **black** ball is chosen.

Arrow _____ shows the probability that a **black** ball **isn't** chosen.

45. Look at the list of five numbers below:

6 **16** **17** **48** **27**

Complete each sentence below by choosing a number from the list.

(a) _____ is a **prime** number.

(b) _____ is a **square** number.

(c) _____ is a **factor of 24.**

(2)

GO STRAIGHT TO PAGE 20

Do not write in this column

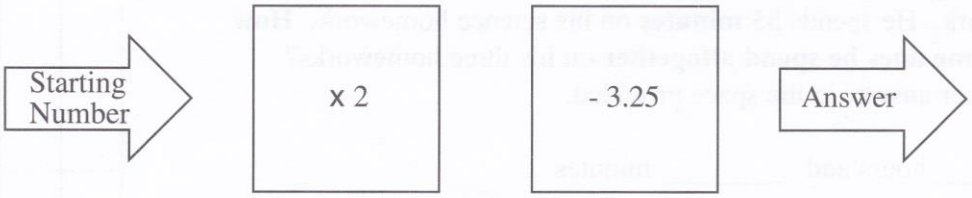
46. Look at the five rules below.

Rule A	Multiply the previous number by 5, then subtract 2
Rule B	Multiply the previous number by 4
Rule C	Add 3 to the previous number, then multiply by 2
Rule D	Add $\frac{1}{2}$ to the previous number, then multiply by 2
Rule E	Add 2 to the previous number

Look at the number sequences below. **Match the correct rule to each number sequence**. The first has been done for you.

1, 3, 5, 7 ...	Rule E
1, 4, 16, 64 ...	Rule ___
1, 3, 7, 15 ...	Rule ___
1, 3, 13, 63 ...	Rule ___
1, 8, 22, 50 ...	Rule ___

47. Look at the function machine below.



(a) What **answer** does the function machine give when the **starting number** is 7?
Write your answer in the space below

_____

(b) What **answer** does the function machine give when the **starting number** is 3.5?
Write your answer in the space below

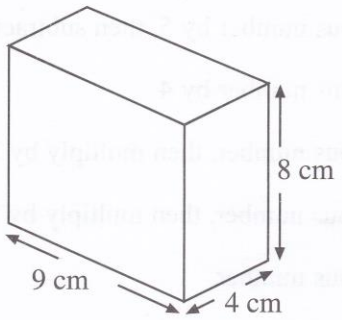
_____

GO STRAIGHT TO PAGE 21

(2)

Do not write in this column

48. Look at the cuboid below. Its dimensions are **8 cm** by **9 cm** by **4 cm**.



What is the **total length of all the edges** of the cuboid?
Write your answer in the space below.

_____ cm

49. The cuboid has six faces. What is the **area of the face** with the **smallest** area? Write your answer in the space below.

_____ cm^2

50. Ben has three homeworks to do for Monday. He spends **45 minutes** on his spelling homework. He spends **$1\frac{1}{2}$ hours** on his mathematics homework. He spends **55 minutes** on his science homework. **How much time does he spend altogether** on his three homeworks?
Write your answer in the space provided.

_____ hours and _____ minutes

51. Siobhan uses her calculator to carry out the calculation:

156 x 2.7 = 421.2

Look at the calculations below. Tick ☑ the boxes next to the **two** calculations that give the answer 421.2.

- 15.6 x 27 ☐
- 156 x 0.27 ☐
- 1.56 x 270 ☐
- 156 x 27 ☐
- 15.6 x 0.27 ☐

(4)

The Snow Walker

Do not write in this column

The morning came when snow blew in the air ... only a thin mist of fine snow but enough to tell us that winter had come and it had not brought the deer.

But a few days afterwards the deer came. Ungyala and I went out with light hearts but only a few deer had come to the river. These few were so poor and lacking in fat that we knew they were not the forerunners of the great herds but stragglers that lagged behind, being either too weak or too sick to keep up. We knew then that the deer spirit had led the herds southward by some different path.

The next day there were no deer at the crossing and none to be seen anywhere upon the sweep of the plains, and we had killed barely enough meat to feed ourselves and the dogs for two months.

The real snows came and we began the winter with hearts that were shaken by misgivings. We thought of abandoning our camp and trying to make our way to the coast but we could not do this until enough snow had fallen to make sled travel possible. So we stayed where we were, hoping we would find some of the solitary winter deer that sometimes remain in the land. Ungyala and I roamed with pack dogs over the country for many long miles. A few hares and ptarmigan fell to our guns, but these were no more than food for our hopes.

Farley Mowat

52. Circle the **best word** or **best group of words** to complete the sentences below.

The passage is about two hunters animals awaiting the arrival of a pack of dogs deer summer. They would find it difficult to survive celebrate the winter if they couldn't hunt hares ptarmigan deer. They couldn't travel to the coast because there were too many hares there were too few dogs their sleds couldn't be used yet.

53. Look at the **second paragraph** of the passage. What **phrase of three words** tells us that the deer were thin? Write your answer in the space below.

_____

(3)

Do not write in this column

54. The phrase **fell to our guns** is used in the **last paragraph** of the passage. **One** of the statements below gives the correct meaning of the phrase. Tick ☑ the statement giving the correct meaning.

- were killed or wounded by the hunters' guns ☐
- lay on the ground when they spotted the guns ☐
- were deceived by the tricks the hunters played ☐
- were attracted by the light glinting on the guns ☐

55. **Four animals** are named in the passage. One is **ptarmigan**. Write the names of the other **three** in the spaces below.

_____

_____

_____

56. The phrase **went out with light hearts** is used in **paragraph two** of the passage. It means one of the following. Tick ☑ the **best** answer.

- the hunters were happy about the arrival of spring ☐
- the snow was causing the hearts of the hunters to beat faster ☐
- the hunters felt ill because they couldn't find deer ☐
- the hunters were optimistic about finding deer ☐

57. Why couldn't the hunters abandon camp and travel to the coast? Look at the four answers below and tick ☑ the **best** answer.

- they didn't have enough food for the journey ☐
- their sled wasn't strong enough to travel ☐
- the snow wasn't deep enough to travel ☐
- their dogs were needed to search for deer ☐

(5)

58. In the passage, what **sentence** suggests that the hunters were **north** of the deer herds? Write the sentence in the space below.

_____

_____

Do not write in this column

(1)

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