CEA

Common Entrance Assessment

Paper 3

Saturday 3 December 2011

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

1. Look at the **function machine** below. You can see that the **starting number** is **divided by 7** and then **4 is taken away** to give the **answer**.

Starting number   Answer

Now look at the function machine below. The **answer** is **missing** in this function machine. Complete the function machine by writing the **correct number** in the **blank arrow**.

Starting number   Answer

2. Look at the function machine below. The **starting number** is **missing** in this function machine. Complete the function machine by writing the **correct** number in the **blank arrow**.

Starting number   Answer

3. Look at the calculation below.

37 x 175 = 6475

Use this to help you complete the **two calculations** below. Write your answers in the spaces provided.

(a) 3.7 x 175 = _____

(b) 6475 ÷ 37 = _____

Do not write in this column

(3)

4. Look at the **6 cards** below. **Each card** has a **number on it**.

| 4 | 6 | 9 | 10 | 14 | 19 |

The cards are placed in a box and the **box is shaken** so that the **cards get mixed** up. I choose a card **at random** and read the number on it. Look at the following five statements:

A. The number is **greater than 9**.

B. The number is **negative**.

C. The number is a **prime** number.

D. The number is **less than 20**.

E. The number is **even**.

Write the letters **A** to **E** in the correct box on the probability line below. One has been done for you.

E

Impossible   Certain
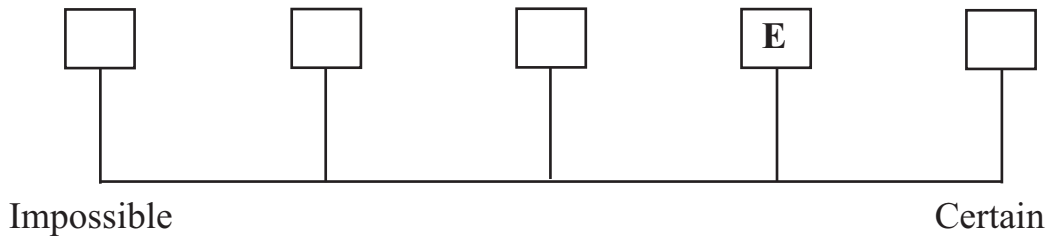
5. Look at the **5 distances** below.

1.2 m   117 cm   130 cm   1.18 m   95 cm

Write these distances in order **from shortest to longest**. The shortest distance has been done for you.

_95 cm_   _____   _____   _____   _____
(shortest distance)   (longest distance)

(2)

6. Andrea is making patterns from sticks. The **first three patterns** are shown below.

Pattern 1 uses **3 sticks**.
Pattern 2 uses **5 sticks**.
Pattern 3 uses **7 sticks**.

 Pattern 1   Pattern 2   Pattern 3

How many sticks does Andrea need to make **Pattern 6**? Write your answer in the space below.

_____ sticks

7. For a school project, children had to **count** the **number of petals** in **7 flowers**. The number of petals on each of the 7 flowers is given below.

      16   17   17   18   16   16   19

Calculate the **mean** (average) number of petals on a flower. Write your answer in the space below.

_____ petals

8. What is the **range** for the number of petals on a flower? Write your answer in the space below.

_____ petals

(3)

If I Could See Anything

If I could see anything, anywhere in the world,
I would watch the whales as they glide under the sea,
cutting through the water and calling to one another.
I would watch as they dip in and out of the waves,
frolicking in their watery playground.

If I could see anything, anywhere in the world,
I would see the foam explode on the tips of the waves
and hear them crash around me and bring me back to earth.
I would taste the salt air on my lips
and feel the sea breeze on my face.

If I could see anything, anywhere in the world,
I would watch the sun melt into the horizon.
I would watch the stars pierce holes in the night sky.
I would watch as the world goes to sleep
and the moon smiles down on us from its heavenly place.

Anonymous

9. Look at **verse one** of the poem. Find the **word** which is **closest in meaning** to **playing**. Write your answer in the space below.

_____

10. Look at the **four statements** below. **Based on your reading of the poem**, which **one** of the statements is **true**? Tick ☑ the correct box below.

    The poet wants to visit an aquarium.   ☐

    The poet wants to swim with whales.   ☐

    The poet wants to hear waves crash.   ☐

    The poet wants to visit a playground.   ☐

(2)

11. Look at the **four pairs of words** below. In each pair **only one** of the words is **spelt correctly**. **Circle** the word with **the correct spelling** in each pair.

(5)

feirce   fierce

soldeir   soldier

greif   grief

their   thier

12. Which of the following **best** describes the mood of this poem?
Tick ☑ the **best** answer below.

tense   ☐

uplifting   ☐

depressing   ☐

frightening   ☐

13. Look at **verse two** of the poem. All five **senses** are mentioned in this verse **except** the sense of **smell**. Find the verbs in verse two which relate to the **other four** senses. **One** has been **done for you**.
Write your answers in the spaces below.

feel _____

_____

_____

_____

(5)

14. In **verse three** of the poem, which phrase of **five or more words** describes the **sun setting**? Write your answer in the space below.

_____

(3)

15. Write the **five words** below in **alphabetical order** in the spaces provided. The first one has been done for you.

world　　　**watch**　　　**whale**　　　**water**　　　**waves**

watch_____

_____

_____

_____

_____

16. In the figure below there are **two points A and B**. There is also a **mirror line**.

A is the point **(4, 4)**.
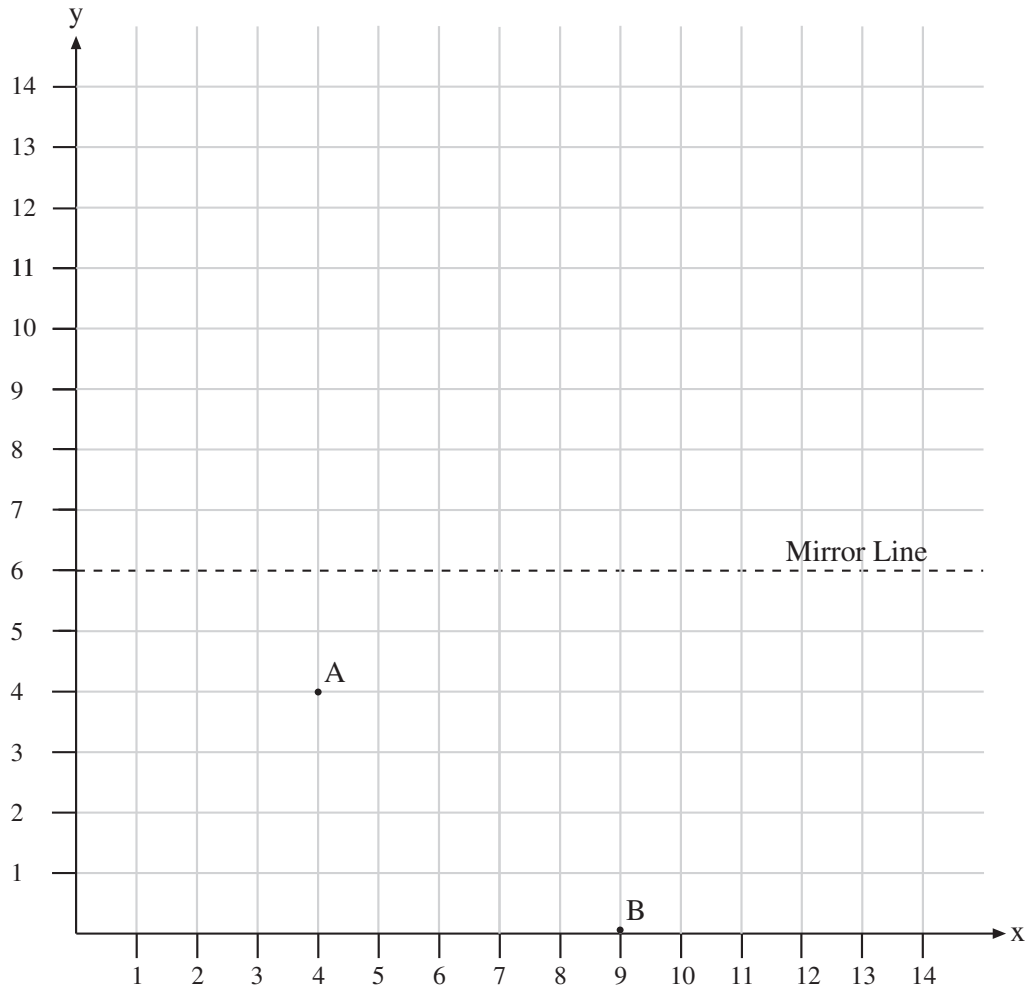
(a) What are the **coordinates of B**? Write your answer in the spaces below.

(__ , __)

(b) The point **A is reflected** in the **mirror line**. What are the **coordinates** of the **new point**? Write your answer in the spaces below.

(__ , __)

17.   How many **minutes** are there in **2³/₄ hours**? Write your answer in the space below.

_____minutes

18.   A string is **5.21 m** long. It is cut into **10 equal pieces**. **How long** is **each piece** of string? Give your answer in **centimetres**. Write your answer in the space below.

_____cm

19.   Joe needs **240 tiles** to cover a floor. The shop only **sells tiles in packs of 25**. How many **complete packs** will Joe need to buy **to cover the floor**? Write your answer in the space below.

_____ complete packs

20.   Joe calculates that the **area of one tile is 100 cm²**. What is the **area of the floor**? Give your answer in **cm²**. Write your answer in the space below.

_____cm²

21.   A **rectangle** is **16 cm long** and **4 cm wide**. A **square** has the **same area** as the **rectangle**. **How long** is **one side** of the **square**? Write your answer in the space below.

_____cm

(5)

22. Look at the shape below.

4 cm

6 cm

5 cm

1 cm
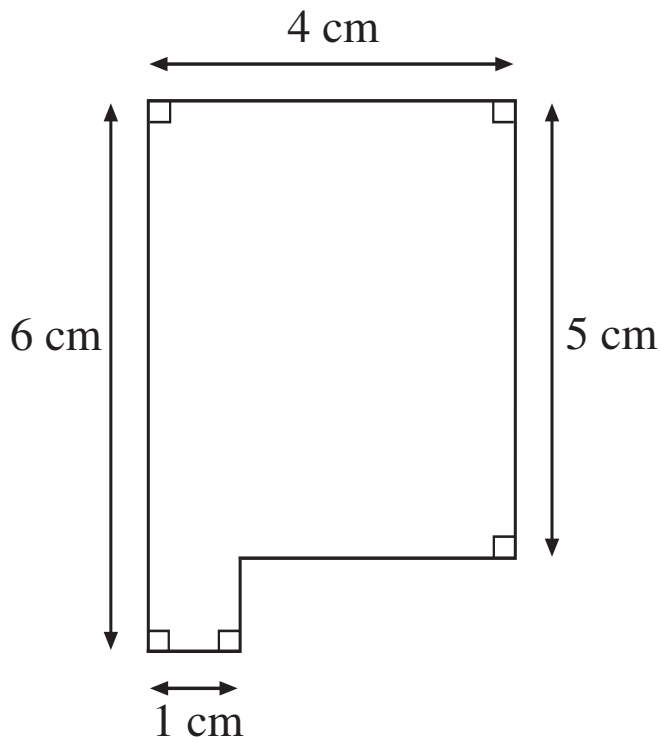
Calculate the **perimeter** of this shape. Write your answer in the space below.

_____cm

23. Look again at the shape in the previous question. Calculate the **area** of the shape. Write your answer in the space below.

_____cm^2

(2)

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

Dreaming of a White Christmas?

In December 2010 temperatures plummeted to as low as   (line 1)
18 degrees below freezing in many parts of Northern Ireland. (line 2)
Thermometers measuring the countrys lowest recorded   (line 3)
temperatures, night after night. Thousands of homes were   (line 4)
without running water or heat for over a week. Hospitals saw   (line 5)
a huge increase in the number of injured patients with broken (line 6)
and fractured bones as a consequence of ungritted, slippery   (line 7)
pavements, The local councils, electric companies and   (line 8)
government bodies came in for harsh criticism.   (line 9)

Over 7000 UK schools were closed in the week leading up to   (line 10)
the Christmas holidays. Many principals expressed grave   (line 11)
concern about the number of authorised absences.   (line 12)

The snowy conditions threwout the winter have also   (line 13)
had a dramatic effect upon wildlife. Did people who enjoyed   (line 14)
playing in the snow and gazing at beautiful icicles   (line 15)
through the window, give any thought to the   (line 16)
birds, insects and animals inhabiting their gardens. The   (line 17)
casualties of the extreme weather where often out of sight.   (line 18)

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

line 6   ☐

line 11   ☐

line 13   ☐

line 15   ☐

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 9 ☐

line 12 ☐

line 17 ☐

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

line 1 ☐

line 6 ☐

line 11 ☐

line 18 ☐

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 8 ☐

line 10 ☐

line 17 ☐

(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 4 ☐

line 7 ☐

line 8 ☐

line 16 ☐

Do not write
in this column

(1)

29. If   x = 7   y = 9   and   z = 3

write the correct number in each of the boxes below.

x - z = ☐

x^2 - y = ☐

---

30. The diagram below shows the distance of objects above or below **Sea Level**. There is a **seagull** and a **fish** in the diagram. The **Ocean Floor** is shown **9 m below Sea Level**. The seagull is **directly above** the fish.

8. 2 m

Sea Level

9 m

Ocean Floor

The seagull is **8.2 m above Sea Level**. **How high** is the seagull **above the Ocean Floor**. Write your answer in the space below.

_____ m

31. The **fish** is **half way** between the **Ocean Floor** and **Sea Level**. How high is the **seagull** above the **fish**? Write your answer in the space below.

_____ m

Do not write in this column

(3)

32. Look at the **seven numbers below**.

   8   9   10   11   12   13   14

   Now look at the **three statements** below. For each statement **choose a number** from the 7 numbers **which makes the statement true**.
   Write the number you have chosen in the space provided.

   (a) _____ is a square number.

   (b) _____ is a multiple of 7.

   (c) _____ lies between the two prime numbers in the list.

---

33. Look at the **24 hour clock time** below.

   19:57

   What is this time as a **12 hour** clock time? Tick ☑ the correct answer.

   7:57 am   ☐

   9:57 am   ☐

   7:57 pm   ☐

   9:57 pm   ☐

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34. On a very snowy day, **75% of Owen's class are absent**. There are normally **28 pupils in the class**. **How many** pupils are **absent**? Write your answer in the space below.

   _____ pupils

35. There are normally **24 pupils in Charlotte's class**. On the same day **only 50% of her class** are at school. **Of the pupils in her class who are at school**, **one quarter** came **late**. **How many pupils** in Charlotte's class **came late** that day? Write your answer in the space below.
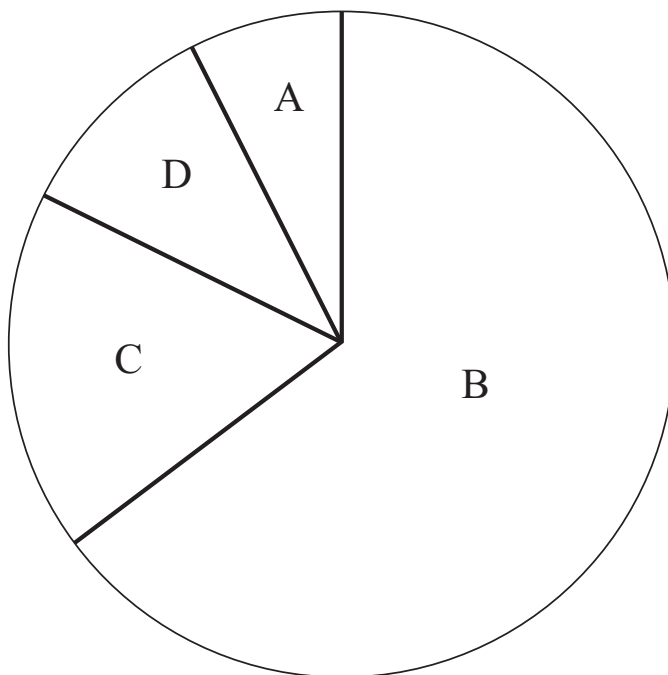
   _____ pupils

Do not write in this column

(4)

36. The human body is made up of different substances.

The table below shows the percentage of the human body made up of oxygen, hydrogen, carbon and other substances. For example, **65%** of the human body is made up of **oxygen**. **The table has some blank spaces.** To complete the table, **look at the pie chart below**. Use the pie chart to write the **correct letter** in each blank space.

Substances	Percentage of human body	Section of Pie Chart
Oxygen	65%	B
Hydrogen	10%	
Carbon	18%	
Other	7%	

Being New

My first day of secondary school and I was running late.
I put on my new uniform and met the school bus at my gate.
I didn't have time to feel nervous, I ran out of time to be scared -
Plus, I'd known this day was coming and had tried to be prepared.

I knew we had assembly, but I didn't know where to go.
The corridor was full of people and I started to feel alone.
But that's when I saw Katie, who lives in a house just up the road!

Katie was talking to Conor, who was really good at maths.
In French, I met my new friend Dev, who could make the whole class laugh.
At break, I played football with Jamie, who scored two of our four,
And then I had drama with Miss Quinn, who let us sit on the floor.

Mr Andrews was really nice, but he had a boring voice.
During library, he let us pick out any two books of our choice.
After lunch, I saw Aoife, whom I knew from primary school,
And Jordan, whose uniform was too big, but everyone thought was cool.

Anna was from Poland and she had loads of Xbox games.
There were lots of other people, but I can't remember their names!
All of us were different, only one thing was the same -
We were all first years in our school and today was our first day.

I started to feel better when I realised it was true,
All of us were nervous and all of us were new!
When mum met me later at the gate, she asked if everyone was nice.
She asked me how my first day went and I just shrugged and said, "Alright".

Brenda Lassman

37. The poet is a new pupil at **which type of school**? Tick ☑ the correct answer below.

Primary School ☐

Secondary School ☐

Nursery School ☐

38. Look at the **three timetables** below. **Based on your reading of the poem**, which timetable is most likely to be the poet's? Write **A**, **B** or **C** in the space below.

Timetable A	Timetable B	Timetable C
Assembly	Assembly	Assembly
Maths	French	Maths
French	Maths	French
Break	Drama	PE
Drama	Break	Drama
Library	Library	Library
Lunch	Lunch	Lunch

The poet's timetable is **Timetable** _____

39 In **verse four**, which word is closest in meaning to **tedious**? Write your answer in the space below.

_____

40. Look at the **four statements** below. **According to verse two**, which statement **best** explains how the poet knows Katie? Tick ☑ the correct statement.

Katie is in the poet's football team. ☐

Katie is a neighbour of the poet. ☐

Katie plays X-box with the poet. ☐

Katie and the poet met on the bus. ☐

(3)

41. Look at the **four statements** below. **According to the poem**, **one** of the statements is **true**. Tick ☑ the **true** statement.

The poet doesn't like Mr Andrews because he has a boring voice. ☐

The poet doesn't tell her mum much about the first day at school. ☐

The poet makes the whole class laugh during the French class. ☐

The poet doesn't recognise any of the other pupils on her first day. ☐

42. In **verse six**, which word is closest in meaning to **inquired**? Write your answer in the space below.

_____

43. Every new pupil receives a letter from the school prefects. Look at the **four sentences** in the letter below. In **each sentence** there are **four words highlighted**. Only **one word** is **correct**. **Circle** the correct word in each sentence.

We hope you enjoy are   our   you're   your first day at secondary school.

We realise are   our   you're   your probably a bit nervous.

The school prefects are   our   you're   your here to answer any questions.

If you need are   our   you're   your help, just call at reception.

(4)

44. The distance between **Village A** and **Village B is 1.6 km**. I **start** at **Village A** and walk **a quarter of the distance to Village B**. **How far** have I walked? Give your answer in **metres**. Write your answer in the space below.

_____ m

45. Below are **three statements about triangles**. **One** of the statements **is false**. Tick ☑ the **one false statement**.

Two sides of an isosceles triangle are the same length. ☐

The angles in an equilateral triangle are all equal to 90°. ☐

All the three angles of a scalene triangle are different. ☐

46. Look at the triangles below
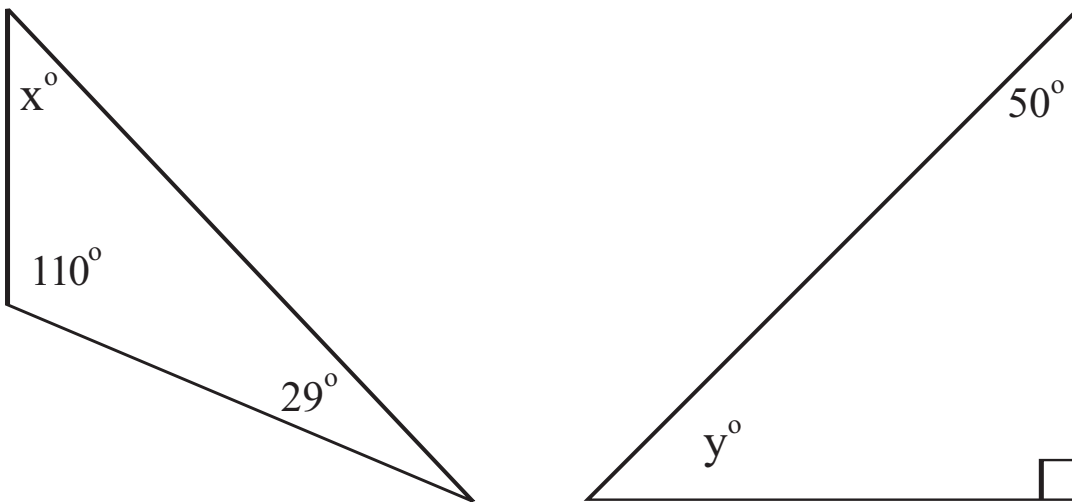
What number do you get when you **add x to y** ? Write your answer in the space below.

_____

Do not write in this column

(3)

47. **You are facing East**. You turn **45° clockwise** and **then 270° anticlockwise**. In **what direction** are you now facing? Tick ☑ the correct answer.

North-East ☐

North-West ☐

South-East ☐

South-West ☐

(3)

48. Look at the **4 statements below**. **Only one** is correct. Tick ☑ the **correct** statement.

A millilitre is a thousand litres. ☐

A millilitre is a hundred litres. ☐

A millilitre is a thousandth of a litre. ☐

A millilitre is a hundredth of a litre. ☐

49. The diagram below shows a cereal box. **It is a cuboid** which is **7 cm** by **21 cm** by **30 cm**.

7 cm

30 cm

21 cm

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

_____ cm³

50. In a quiz you get **5 points for a right** answer and you **lose 3 points for a wrong** answer. At the end of the quiz a team can have a **positive** or a **negative** number of points.

(a) At the end of the quiz, Team A has given **9 right** answers and **1 wrong** answer. **How many points** do they have? Write your answer in the space below.

_____ points

(b) At the end of the quiz, Team B has given **3 right** answers and **7 wrong** answers. **How many points** do they have? Write your answer in the space below.

_____ points

51. Team C are taking part in the same quiz. Team C **answer 10 questions**. Look at the **three scores** below. Which of these scores is **not** a possible score for Team C? **Circle** the score which is **not a possible score**.

10   **41**   **50**

The Rower

The waves rattled over the sandy shore, rolling the shiny pebbles and billowing under the leafy lily pads that floated on the surface of the lake like a watery, green skin. Our narrow, eight-person boat drifted away from the old dock, pulling at the rough ropes that held it. Across the dock, our competitors were already seated, eight heads in a row bent as they secured their feet to the bottom of the boat.

Rebecca, the girl who sits behind me in our boat, gave my shoulders a squeeze. This was my first race. In rowing, a race is called a 'regatta' and I am the 'eight seat'. I set the pace. It's a lot of pressure: if I start rowing too quickly, my team will get tired and we'll lose; too slowly and the other boat will pull ahead and we may not be able to catch up with them.

With a deep breath, I lower myself into the thin, light boat and into my seat. I ignore the freezing cold water on either side of me, inches away, and put my feet into the special shoes stuck to the bottom of the boat. Now I'm ready. Our coach helps me lock my oar in place and wishes us luck as he pushes the boat away.

I hardly hear the race official blow her whistle to start the race, I'm so nervous. A lunge and a sudden jolt and the boat takes off, skimming the surface of the water. I close my eyes and set the pace: drop, catch, pull, twist, release. The oar broke into the water and it was rough under my hands. The other boat was left behind.

In a few minutes, we would cross the finish line. If we could keep up this pace, we would win.

Jennifer Perry

52.   Look at **paragraph one**. Only **one** of the statements below is **true**.
Tick ☑ the **true** statement below.

The rowing race or 'regatta' is being held at the seaside. ☐

The competitors are standing ready on the opposite shore. ☐

The two teams are staring across the water at each other. ☐

There are sixteen competitors: eight rowers in each boat. ☐

(1)

53. Look at **paragraph two**. In this paragraph, which **noun** is **closest in meaning** to **speed**? Write your answer in the space below.

_____

(5)

54. Look at the **four plural nouns** below. In the spaces below write the **singular form** of each of the plural nouns. The answers are **not** found in the passage. The first one is done for you. **Be careful with your spelling.**

feet   <u>foot</u>

geese   _____

octopuses   _____

libraries   _____

55. Look at **paragraphs three and four**. **Based on your reading of the passage**, when does the race **start**? Tick ☑ the **best** answer below.

The race starts when the coach pushes the boat from the dock. ☐

The race starts when every competitor has laced their shoes. ☐

The race starts when the official blows her starting whistle. ☐

The race starts when all the rowers' oars are locked into place. ☐

56. Look at **paragraph four**. Which phrase of **five or six words** tells us that the boat **does not move smoothly at first**? Write your answer in the space below.

_____

_____

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

	True	False
The author and Rebecca had often raced together.	☐	☐
The author's team is ahead at the end of the story.	☐	☐
The author puts on her special shoes on the shore.	☐	☐

58. The four words **boat**, **quickly**, **lunge** and **light** are used in the passage. Tick ☑ the correct box to show how each one has been used.

	verb	noun	adjective	adverb
boat				
quickly				
lunge				
light				

(3)

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