

1

Look at the number written in words below:

Two hundred and one thousand, sixty four and 6 hundredths

What is this number written as a decimal number?

- A 200164.06 B 201,064.6 C 201,064.06 D 201,064.006 E 210,064.06

2

Jemima keeps fish in a tank.

The maximum number of fish = volume of tank in litres $\div$ 11.

What is the maximum number of fish she can keep in a tank of 187 litres?

- A 16 B 17 C 18 D 19 E 20

3

In a game, for every 18 points you collect, you are given a prize.

Pupil 1 has enough points for exactly 11 prizes.

How many points have they collected?

- A 180 B 189 C 207 D 198 E 216

4

In the same game (18 points per prize), Pupil 4 collects 200 points.

How many prizes are they given?

- A 11 B 12 C 10 D 9 E 13

For question 5, you have to **tick** your answers in the space provided.

5

There are twenty 2D shapes in a box:

- 5 squares
- 1 circle
- 6 rectangles
- 8 pentagons

One shape is chosen at random.

Tick to show whether each statement is **true** or **false**.

True False

The probability the shape is a pentagon is $\frac{2}{5}$

The probability the shape is a rectangle is $\frac{3}{10}$

The probability the shape is a square is $\frac{1}{5}$

Read the **whole** passage carefully, then answer the questions that follow.

In the Lab

1. Roger mixed the blue liquid into the yellow liquid carefully for the fifth time that day. The four
2. Previous attempts had failed. Each time, the experiment had produced only hydrogen. Quentin,
3. a fellow scientist, had checked the calculations meticulously three times.

4. "OK, it turned green," Roger declared. "We've got that part right. What's step four?" "Add 1
5. gram of aluminium powder," said Quentin. Roger measured 1 gram of the silvery white powder
6. with shaky hands, clearly nervous. He then mixed it in. "OK, next?" "Heat the mixture over a
7. medium flame for 90 seconds," Quentin said. The tension in the room could be cut with a knife!
8. Roger held the container over the flame with a pair of malleable tongs. He looked at the
9. second hand on his watch and counted 90 seconds. "Now add the sulphur tablet and put in the
10. stopper and tube," said Quentin.

11. Roger dropped a yellow disk into the container. The liquid inside fizzed and bubbled. He
12. pushed a stopper into the neck of the container and slid a plastic tube into a hole in the centre
13. of the stopper. Quentin handed an instrument to Roger, who held it at the open end of the
14. plastic tube, measuring the gas coming out. The two men stared at the instrument for 60
15. seconds. "Just hydrogen," Roger sighed. Quentin's head drooped. "I hope the sixth time's a
16. charm."

For these questions you have to **write your answers**, neatly, in the boxes provided.

- 1** Look at lines 1–3. Give two details that the text tells us about the four previous attempts at the experiment.

- 2** Look at line 7. What does the sentence 'The tension in the room could be cut with a knife' tell you about the atmosphere in the lab?

3 Look at line 15. What does the word 'drooped' suggest about how Quentin felt when the result was just hydrogen?

4 Which one part of speech are the following words as they appear in the passage?
blue (line 1), **silvery** (line 5), **shaky** (line 6), **malleable** (line 8)

5 Which part of speech is 'watch' as it appears in the passage? (line 9)

Answers

Maths

- 1) C 201,064.06
- 2) B 17
- 3) D 198
- 4) A 11
- 5) TTF

English

- 1) Accept any valid response, e.g.: all four previous attempts had failed (lines 1–2); each time the experiment produced only hydrogen (line 2); Quentin had checked the calculations three times (lines 2–3)
- 2) Accept any valid response, e.g.: the atmosphere was extremely tense / full of anxiety; everyone was on edge / very nervous because so much depended on this attempt
- 3) Accept any valid response, e.g.: ‘drooped’ suggests Quentin felt disappointed / dejected / defeated / downhearted that the result was once again only hydrogen
- 4) Adjectives
- 5) Noun