

1

At the start of an event, 57 people are in a hall.

Each person is either sitting or standing.

Some time later 8 people that were sitting stand up.

Now two thirds of the hall are sitting.

How many people were sitting at the start of the event?

A 38

B 42

C 46

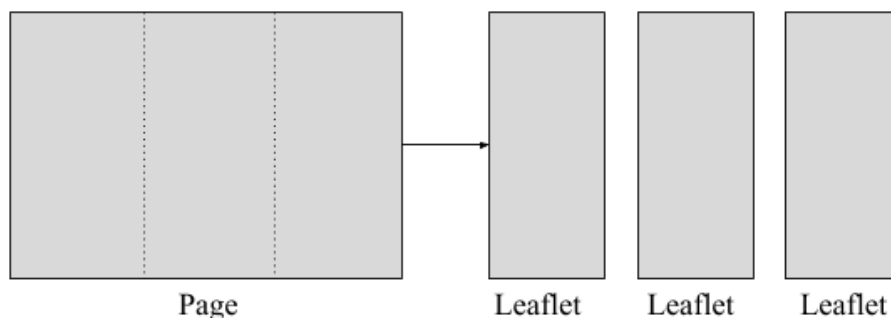
D 50

E 54

2

A rectangular page is 0.3 mm thick.

It is cut into thirds to make three identical leaflets.



Leaflets made from 500 pages are stacked in a vertical pile.

What is the total height of the pile?

A 15 cm

B 30 cm

C 45 cm

D 60 cm

E 90 cm

3

A map has the following scale: 1 centimetre represents 6 kilometres.

A mountain top and a restaurant are 3.7 centimetres apart on the map.

What is the actual distance between the mountain top and the restaurant?

A 3.7 km

B 16.3 km

C 22.2 km

D 26.7 km

E 37.0 km

4

The denominator of a fraction is 9 and the numerator is 7.

$$\frac{7}{9}$$

The denominator of an equivalent fraction is 36 more than the denominator of the fraction above.

What is the numerator of the equivalent fraction?

A 28

B 32

C 35

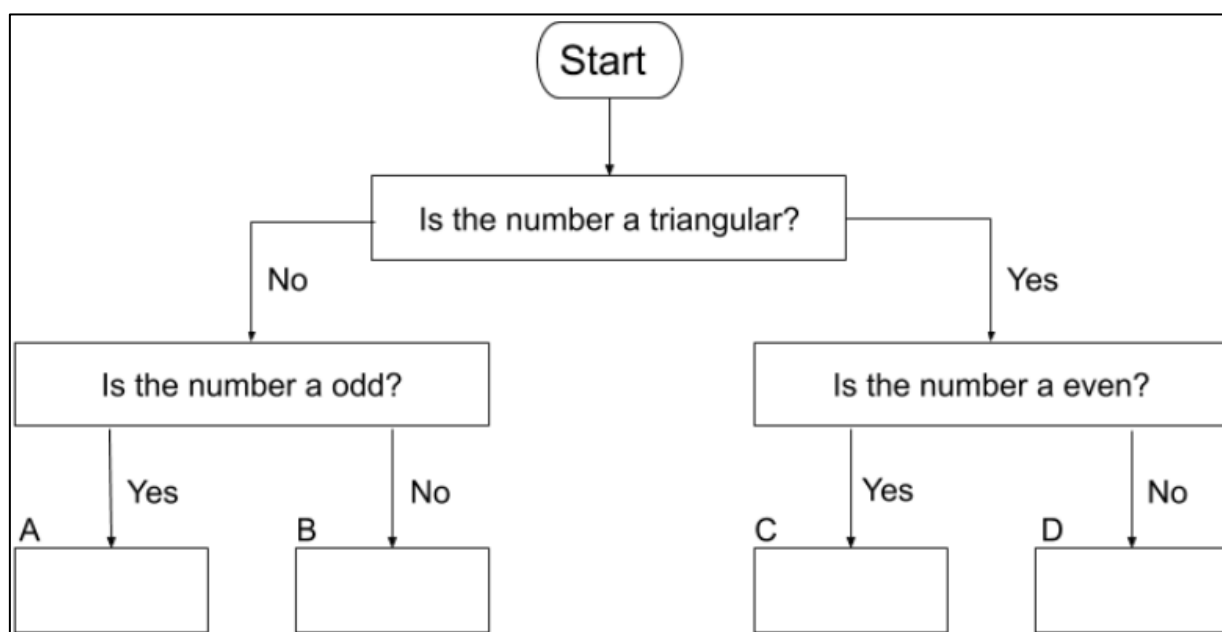
D 36

E 49

For question 5, you have to **write your answer** in the space provided.

5

1 6 12 21 25 28



One of the 6 numbers in the rectangle above goes in box A.

Which number?

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

Two Volcanoes

1. Leah thought there was a good chance that her volcano project would win first place at the
2. Science fair. She had covered a glass tube with a cone-shaped wire frame and plaster. Then
3. she had painted it brown, so the cone looked like an authentic mountain. When it was her turn
4. to present her project, she would put baking soda into the glass tube and add vinegar to it. The
5. vinegar and acid would cause a chemical reaction, and the mixture would bubble up out of the
6. top. She even added red food colouring to the vinegar to make the mixture look like hot lava.
7. The handwritten notecards next to the model on the display explained how a volcano erupts.

8. Rachel thought it was very likely that her volcano would win first place at the science fair. She
9. had sculpted a mountain from brown clay and had shaped pieces of red, orange, and black
10. clay to represent lava flowing down the sides. She had even formed small rocks and trees out
11. of clay and used toothpicks to stick them to the mountain slopes. The detailed display featured
12. several notecards with neatly hand-lettered titles and interesting facts about volcanoes.

13. On the day of the science fair, the girls saw each other's entries. Each girl admired the other's
14. project. "I like your trees and rocks," Leah said, with a slight undertone of jealousy.
15. "Thanks," Rachel replied, her previous confidence slowly leaving. "I can't wait to see your
16. volcano in action!" They wished each other good luck and waited for the judges to choose the
17. best project.

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

- 1** Look at lines 1–7. Name two things Leah used to make her volcano look realistic.

- 2** Look at lines 13–14. What does Leah saying "I like your trees and rocks" with "a slight undertone of jealousy" suggest about how she is feeling? Give one detail from the text to support your answer.

3

Look at line 3. What does the word “authentic” suggest about what Leah was trying to achieve with her volcano model?

4

Which part of speech are the following words as they appear in the passage?
authentic (line 3), **chemical** (line 5), **handwritten** (line 7), **detailed** (line 11)

5

Which part of speech is ‘neatly’ as it appears in the passage? (line 12)

Answers

Maths

- 1) C 46
- 2) C 45 cm
- 3) C 22.2 km
- 4) C 35
- 5) 25

English

- 1) Any two from: painted it brown; added red food colouring to the vinegar to make it look like lava; covered a glass tube with a cone-shaped wire frame; covered it with plaster
- 2) Accept any valid detail, e.g.: she admired Rachel's project but felt envious; the word "undertone" shows she was trying to conceal her jealousy / she tried to seem complimentary whilst masking her true feelings
- 3) She wanted the model to look genuine / real / like a real mountain; she aimed to make it as believable as possible so it could be mistaken for an actual volcano
- 4) Adjectives
- 5) Adverb