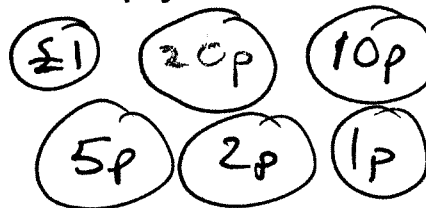


1

A child buys some sweets that cost £1.38.

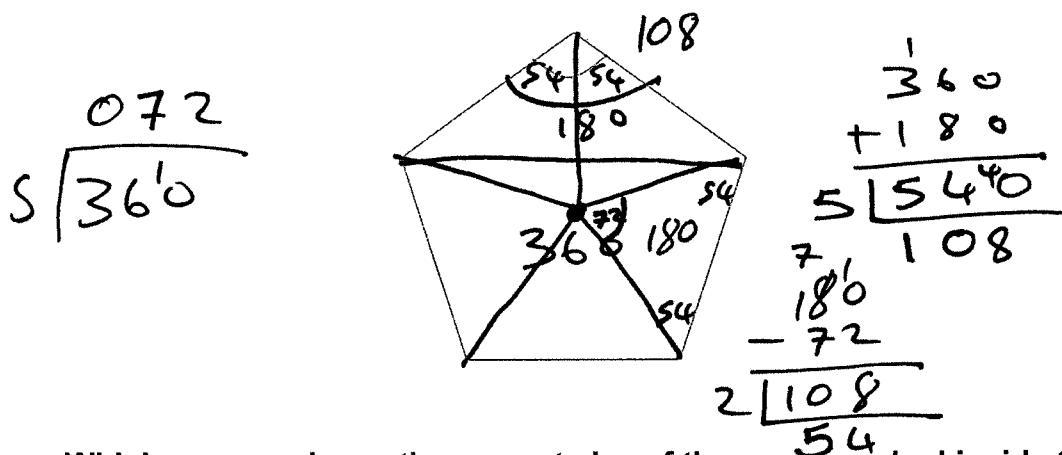
What is the least number of coins they can use to pay the exact cost of the sweets?

A 4    B 5    **C 6**    D 7    E 8



2

A regular pentagon is made up of five isosceles triangles.



Which answer shows the correct size of the angle marked inside the regular pentagon?

A 72°    B 90°    C 100°    **D 108°**    E 120°

3

The total perimeter of the regular pentagon shown **above** is 123 cm.

What is the length of one side?

A 20.5 cm    B 22.3 cm    **C 24.6 cm**    D 25.5 cm    E 30.75 cm

$$\begin{array}{r} 024.6 \\ 5 \overline{) 123.30} \end{array}$$

4

A 3D shape has 12 edges

Four of its faces are rectangles.~~cube~~ or cuboid  
cuboid

What type of 3D shape is this?

- A Cube  
 B Triangular prism  
 C Triangular based pyramid  
 D Square based pyramid  
 E Cuboid

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

5

A child's dad gives them some money to buy sweets.

The child buys the sweets costing £1.80.

They now have two-fifths of the money left.

How much money did the child's dad give her?

£ 3.00

$$\div \frac{3}{5} \text{ of } \underline{\pounds 3.00} = \pounds 1.80$$

 $\frac{3}{5}$  spent

$$3 \overline{) 180} \begin{array}{r} 60 \end{array}$$

$$\begin{array}{r} 60 \\ \times 5 \\ \hline 300 \end{array}$$

## 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.

1

Which statement best expresses the main idea of the passage?

- ☒ A Two girls each make a volcano project and admire each other's work at the science fair.
- ☐ B A science fair judge must decide between two nearly identical volcano models.
- ☐ C Leah wins first place with her chemical reaction volcano.
- ☐ D Rachel is disappointed that she did not add a chemical reaction to her project.
- ☐ E Science projects are most impressive when they involve real chemical reactions.

2

What does Leah add to the vinegar to make her volcano look more realistic?

- A Blue food colouring
- B Baking soda
- ☒ C Red food colouring
- D Brown paint
- E Orange clay

3

Which of the following is NOT supported by the passage?

- line 6 ~~A~~ Leah used red food colouring to make her lava look realistic.  
line 11 B Rachel used toothpicks to fix trees and rocks to the mountain slopes.  
line 12 ☒ C The judges announced a winner before the girls saw each other's projects.  
line 7 D Leah placed handwritten notecards next to her model.  
line 1, 8 E Both girls believed they had a good chance of winning first place.

4

When Leah saw Rachel's project, \_\_\_\_\_.

- A She decided to add clay figures to her own model.  
B She told the judges that Rachel's entry was superior.  
☒ C She admired it and said she liked the trees and rocks, though she felt a slight jealousy.  
D She immediately knew that she had already lost the competition.  
E She refused to speak to Rachel until the results were announced.

5

What does "her previous confidence slowly leaving" suggest about Rachel?

- ~~A~~ She is angry that Leah's project is not as impressive as her own.  
~~B~~ She has realised that she made a mistake in choosing clay over a chemical reaction.  
☒ C Seeing Leah's impressive model causes her self-assurance to waver.  
~~D~~ She has decided to withdraw her entry from the competition.  
~~E~~ She is relieved that the judges have not yet made their decision.