

PRACTICE 6

You are going to read a story about the origin of Archimedes' principle. Six sentences have been removed from the article. Choose from the sentences (A – H) to fit each gap (1 – 6). There are two extra sentences which you do not need to use.

For each question, write the correct answer (A – H) in the space provided.

The Origin of Archimedes' Principle

Archimedes was a scientist who lived 2,300 years ago in Greece. At that time, Greece was ruled by a king. **1** He wondered if the goldsmith had used a cheaper metal and coated the crown with gold. He decided to get Archimedes to help him find out if the crown was made of solid gold without damaging the crown. **2**

Archimedes knew of no common metal that was as dense as gold. Since tin, copper and even silver were less dense, it would take twice as much of any of these metals to weigh the same as a lump of gold. **3**

One day, as he stepped into his bathtub, some water spilled out. Suddenly, he had a great idea. **4**

Archimedes weighed the crown. Next, he put it into a container full of water and measured how much water spilled out. He repeated the experiment with a lump of gold that had the same weight as the crown. **5** He found that more water spilled out when the crown was lowered into the pitcher of water. The crown had more metal in it than the lump of solid gold. **6**

- A** He had found the answer to the king's question.
- B** The king often wondered whether his crown was made of solid gold.
- C** Archimedes thought about this problem all the time.
- D** If the crown was solid gold, the amount of water that spilled out would be the same.
- E** He was also a great mathematician and was known to make many precise calculations.
- F** This was no easy task but Archimedes accepted the challenge.
- G** He engineers mirrors to focus the beams of the sun.
- H** He was so excited that he ran out to the streets shouting 'Eureka!' which means 'I've found it!'

[6 marks]