

**Read the story of Archimedes and his bath and complete the text with the correct past tense of the verbs in brackets.**

Archimedes, the Greek mathematician, is probably most famous for the story of King Hieron II of Syracuse and the gold crown. The king <sup>1</sup> \_\_\_\_\_ (want) to give a gold crown as a gift to the gods, and <sup>2</sup> \_\_\_\_\_ (give) a carefully weighed amount of gold to a goldsmith. The man <sup>3</sup> \_\_\_\_\_ (produce) a beautiful crown, but the king was worried that the craftsman <sup>4</sup> \_\_\_\_\_ (not use) all the gold to make the crown. Dishonest craftsmen often <sup>5</sup> \_\_\_\_\_ (mix) gold with silver, which was cheaper, but the king could not find a way of proving that the man <sup>6</sup> \_\_\_\_\_ (do) this. He <sup>7</sup> \_\_\_\_\_ (ask) Archimedes to solve the problem.

Archimedes <sup>8</sup> \_\_\_\_\_ (know) that gold and silver have different densities. The problem was that nobody could calculate the mass of an object like a crown. While Archimedes <sup>9</sup> \_\_\_\_\_ (think) about this problem, he decided to go to the public baths to relax. While he <sup>10</sup> \_\_\_\_\_ (climb) into the bath, he <sup>11</sup> \_\_\_\_\_ (notice) some water on the floor. It <sup>12</sup> \_\_\_\_\_ (spill) over the side of the tub and he <sup>13</sup> \_\_\_\_\_ (realize) that he <sup>14</sup> \_\_\_\_\_ (solve) the problem by accident. The total amount of water that <sup>15</sup> \_\_\_\_\_ (spill) out of the bath must be the same as the volume of his body. He could use a piece of pure gold and calculate its volume, and then test the crown and see if it was the same. According to the story, he <sup>16</sup> \_\_\_\_\_ (jump) straight out of the bath and <sup>17</sup> \_\_\_\_\_ (run) down the street calling 'Eureka – I've found it.' The goldsmith soon <sup>18</sup> \_\_\_\_\_ (admit) that he <sup>19</sup> \_\_\_\_\_ (cheat) the king and was punished. Archimedes <sup>20</sup> \_\_\_\_\_ (discover) the principle of buoyancy.

