In The Balance

The balance scale compares the mass of two objects. When the plates are in balance, the objects placed on them have the same mass; if one plate gets lower, the object placed on that side has more mass.

Archimedes, the great mathematician of ancient Greece, is attributed to have said: "Give me a point of application (fulcrum) and I will lift the world!"
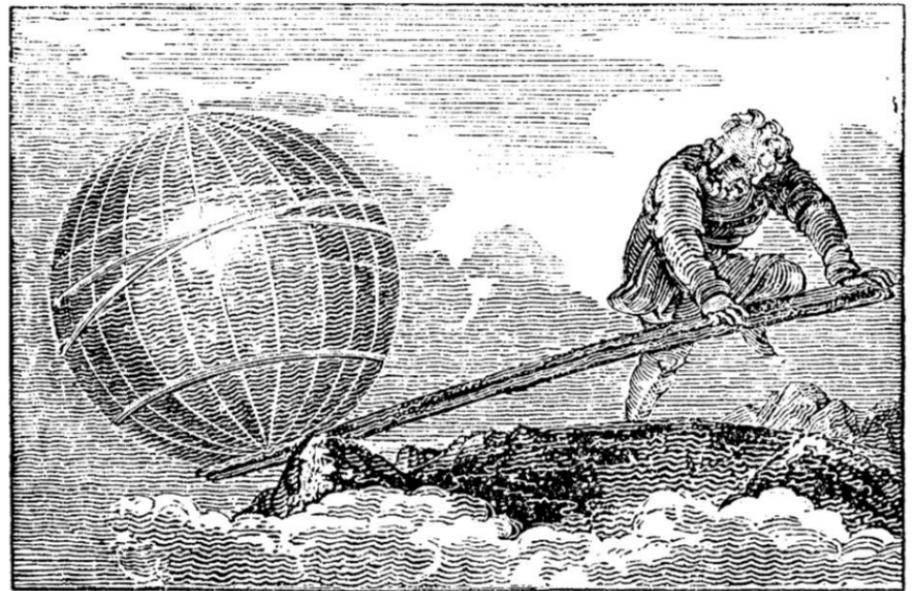
Mechanic's Magazine, 1824

There are 9 look alike coins. 8 Weigh the same. One is heavier. What is the fewest number of weightings required to find it? Use the scale to find the solution.

If you shift the fulcrum, the weights relate in proportion. What weights from 1 to 5 should figure below?