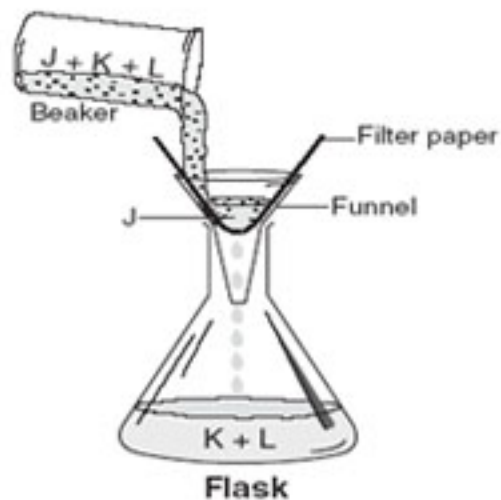


- 1 Raheem is investigating the properties of several substances. He prepared a beaker containing substances J, K, and L and filtered the contents through a funnel into a flask, as shown below.



What term **best** describes substances J, K, and L inside the beaker before Raheem poured them through the filter paper?

- Ⓐ mixture
- Ⓑ solution
- Ⓒ compound
- Ⓓ pure substance

**1** The correct answer is A (mixture).

Strand: A—The Nature of Matter

Benchmark: SC.A.1.2.4 The student knows that different materials are made by physically combining substances and that different objects can be made by combining different materials.

An understanding of mixtures is needed to answer this question. Mixtures are combinations of two or more different substances. Mixtures can be separated by physical processes such as filtering. Since substance J was separated from the other substances by filtering, the original combination of substances was a mixture.

#### Distractor Rationale

- B. Solutions are a type of mixture where two or more substances are evenly dispersed. Solutions cannot be separated using filter paper. The mixture of K + L in the bottom of the flask may be a solution, but the original mixture of J + K + L was not, since J was separated by the filter paper.
- C. A compound is a chemical combination of substances. Compounds cannot be separated into their components by filtering.
- D. A pure substance is an element or a compound. Filtering cannot separate pure substances.