Modeling Matter with Legos

Activity Response Form

Directions: “Classify” each Lego sample by choosing statement a or b (circle the letter) for each, and then circling terms and filling in the blanks with the appropriate symbols.

1 a. Sample # 1 is a pure substance consisting of the (element, compound) ________ .

   (or)

   b. Sample #1 is a mixture consisting of the (element, compound) ________ and the (element, compound) ________ .

2 a. Sample # 2 is a pure substance consisting of the (element, compound) ________ .

   (or)

   b. Sample # 2 is a mixture consisting of the (element, compound) ________ and the (element, compound) ________ .

3 a. Sample # 3 is a pure substance consisting of the (element, compound) ________ .

   (or)

   b. Sample # 3 is a mixture consisting of the (element, compound) ________ and the (element, compound) ________ .

4 a. Sample # 4 is a pure substance consisting of the (element, compound) ________ .

   (or)

   b. Sample # 4 is a mixture consisting of the (element, compound) ________ and the (element, compound) ________ .

5 a. Sample # 5 is a pure substance consisting of the (element, compound) ________ .

   (or)

   b. Sample # 5 is a mixture consisting of the (element, compound) ________ and the (element, compound) ________ .

6 a. Sample # 6 is a pure substance consisting of the (element, compound) ________ .

   (or)

   b. Sample # 6 is a mixture consisting of the (element, compound) ________ and the (element, compound) ________ .

7 a. Sample # 7 is a pure substance consisting of the (element, compound) ________ .

   (or)

   b. Sample # 7 is a mixture consisting of the (element, compound) ________ and the (element, compound) ________ .

8 a. Sample # 8 is a pure substance consisting of the (element, compound) ________ .

   (or)

   b. Sample # 8 is a mixture consisting of the (element, compound) ________ and the (element, compound) ________ .

9 a. Sample # 9 is a pure substance consisting of the (element, compound) ________ .

( or..)

b. Sample # 9 is a mixture consisting of the (element, compound) ________ and the (element, compound) ________ .
10 a. Sample #10 is a pure substance consisting of the (element, compound) ________.
   (or)
   b. Sample #10 is a mixture consisting of the (element, compound) __________ and the
      (element, compound) ________.

11 a. Sample #11 is a pure substance consisting of the (element, compound) ________.
   (or)
   b. Sample #11 is a mixture consisting of the (element, compound) __________ and the
      (element, compound) ________.

12 a. Sample #12 is a pure substance consisting of the (element, compound) ________.
   (or)
   b. Sample #12 is a mixture consisting of the (element, compound) __________ and the
      (element, compound) ________.

Questions
1. Which sample might represent an ionic compound? ________________
   Explain

2. Which sample best represents oxygen (O₂)?
   Explain

3. Which sample would be the best (although inadequate) representation of the metal iron? ____
   __________
   Explain

4. Isomers are molecules with the same formulas, but different structures. Which sample
   contains isomers? ______

5. State one way the Lego samples reasonably represent matter on the atomic scale.

6. State three ways the Lego samples do not represent matter on the atomic scale.
   1.
   2.
   3.