



Standardized Test Prep

Answer the following items on a separate piece of paper.

MULTIPLE CHOICE

- Magnesium reacts with hydrochloric acid to produce magnesium chloride and hydrogen gas. The reactants in this reaction are
 - magnesium and magnesium chloride.
 - hydrochloric acid and hydrogen gas.
 - magnesium and hydrochloric acid.
 - magnesium chloride and hydrogen gas.
- Matter that has a definite shape and a definite volume is
 - a liquid.
 - an element.
 - a solid.
 - a gas.
- We know that air is a mixture and not a compound because
 - it can be heated to a higher temperature.
 - it can be compressed to a smaller volume.
 - it is colorless.
 - its composition can vary.
- Matter can be defined as anything that
 - has weight.
 - has mass and volume.
 - is uniform throughout.
 - exhibits both chemical and physical properties.
- Which of the following is best classified as a homogeneous mixture?
 - pizza
 - blood
 - hot tea
 - copper wire
- A compound differs from a mixture in that a compound
 - contains only one element.
 - varies in chemical composition depending on the sample size.
 - has a definite composition by mass of the elements that the compound contains.
 - can be classified as either heterogeneous or homogeneous.
- Which of the following is *not* a physical state of matter?
 - solid
 - gas
 - element
 - liquid

- Three of the following must contain two or more kinds of atoms. Which one does *not* contain two or more kinds of atoms?
 - element
 - compound
 - homogeneous mixture
 - heterogeneous mixture
- Which of the following symbols does *not* match the element name given?
 - Al, aluminum
 - Co, copper
 - K, potassium
 - P, phosphorus

SHORT ANSWER

- Give three examples of mixtures, and tell whether each one is homogeneous or heterogeneous. Give three examples of compounds.
- In trying to identify a sample of a pure substance, we observe the following properties. Tell whether each one is a chemical property or a physical property.
 - Its mass is 124.3 g.
 - It is a shiny solid at room temperature.
 - It is easily etched by nitric acid.
 - It melts when heated to 670°C.
 - It is 31.7 centimeters long.
 - It is a good heat conductor.
 - It burns in air.
 - It is a good conductor of electrical energy.

EXTENDED RESPONSE

- Describe the difference between a chemical change and a physical change. Give one example of each kind of change.
- Describe general properties of metals, nonmetals, and metalloids.

Test TIP Remember that if you can eliminate two of the four answer choices, your chances of choosing the correct answer choice will double.