

Name: _____

Part I. Circle your answers

1. If a sample of matter is uniform throughout and *cannot* be separated into other substances by *physical means*, it is _____.
A) a compound
B) either a compound or an element
C) a homogeneous mixture
D) a heterogeneous mixture
E) an element
2. What volume of 10.0 M H_2SO_4 is required to prepare 4.0 L of 0.50 M H_2SO_4 ?
A) 0.20 L
B) 0.40 L
C) 0.50 L
D) 1.0 L
E) 4.0 L
3. A solution of silver nitrate is mixed with a solution of potassium fluoride. If a precipitate forms, the precipitate is:
A) Silver fluoride
B) Potassium nitrate
C) Potassium fluorate
D) Nitric fluoride
E) No precipitate is formed
4. If 5.0 mol of both hydrochloric acid and sodium sulfide are mixed and reacted according to the equation below, how many moles of hydrogen sulfide (H_2S) are produced?
$$\text{HCl} + \text{Na}_2\text{S} \rightarrow \text{H}_2\text{S} + \text{NaCl}$$

A) 1 mol
B) 1.25 mol
C) 2.5 mol
D) 3 mol
E) 5 mol
5. Which of the following is *not* a physical process?
A) distillation
B) filtration
C) chromatography
D) evaporation
E) none of the above