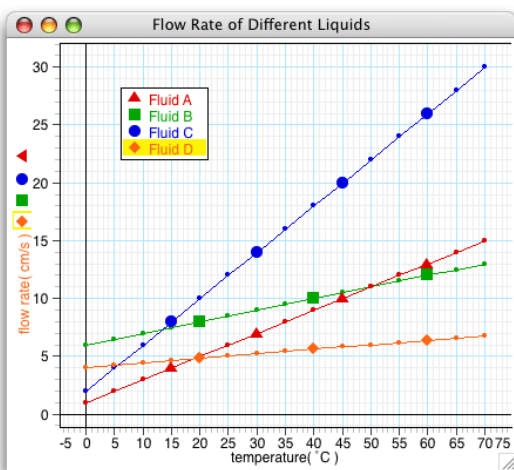


## Unit 02 Review Sheet – Fundamentals of Matter

1. Classify the following as physical or chemical properties: brittleness, boiling point, combustibility, area, density, electrical conductivity, reactivity with acids, ability to resist reacting with oxygen, hardness, length, volume, malleability, ability to neutralize acids, flammability and viscosity.

2. Of the physical properties in question 1, which are intensive and which are extensive?

3. According to the following graph, at 30C, which liquid has the highest viscosity?



4. Determine whether the following are chemical or physical changes:

- a. Ice melting on a hot day
- b. Wood burning in a fire place
- c. Food being digested by stomach acids and enzymes
- d. A rock being crushed
- e. Water molecules being split into Hydrogen and Oxygen

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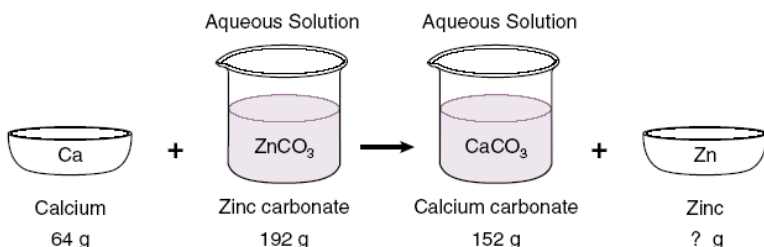


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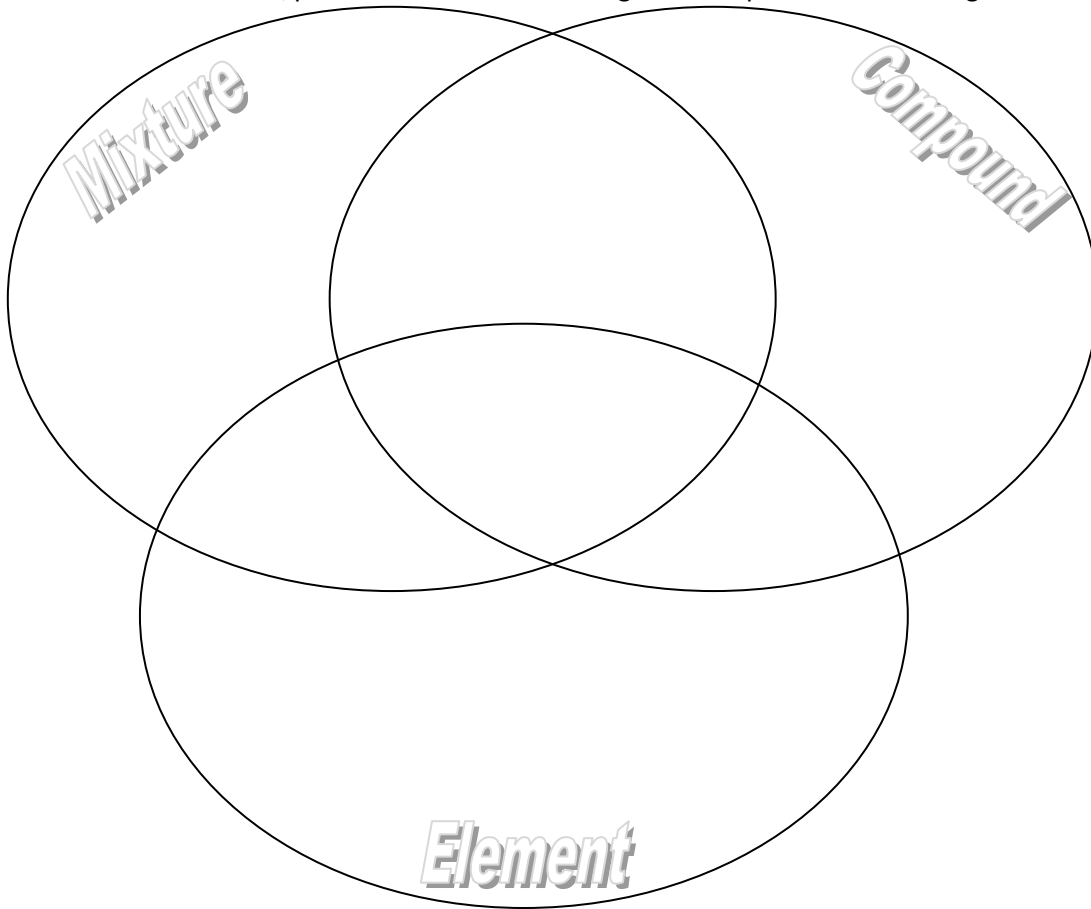


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5. According to the law of conservation of mass, how much zinc is produced in this reaction?



6. Use the words/phrases with stars on the right to complete the Venn diagram below:



**Properties Include:**

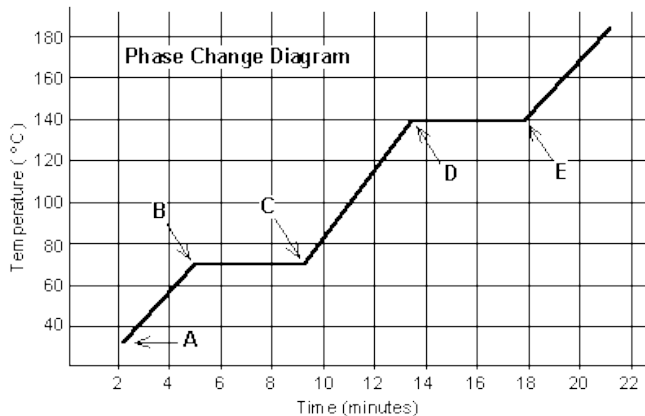
- \*Pure Substance
- \*Made of Atoms
- \*Made up of two substances combined chemically to form a new substance
- \*Can be separated physically
- \*A substance that contains only one kind of atom
- \*Homogeneous
- \*Can be Homogeneous or Heterogeneous
- \*Can be solid, liquid or gas

**Examples include:**

- \*Iron
- \*Water
- \*Air

7. Imagine a chemical reaction in which two substances are combined to produce new products and there is a release of energy. In this example, would the reactant or product molecules have had greater potential energy? Explain. Also, what ways might the excess energy have been released after the reaction?

Use the following phase change diagram for the remainder of the questions:



8. What process is occurring at Point B?
9. What state(s) of matter is/are present between points B and C?
10. Is this substance water? How do you know?