

**Answer: smallest to largest**

 **O2**

 **N2**

 **H2O**

 **C12H22O11 (Sucrose)**

 **Lead**

 **Iron**

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**Answer:**

 **a. gas**

 **b. liquid**

 **c. gas**

 **d. solid**

 **e. gas**

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**Answer: greatest to smallest:**

 **Pb (lead)**

 **NaCl (sodium chloride)**

 **Mg (Magnesium)**

 **H2O**

 **Methanol (CH3OH)**

 **Hexane (C6H14)**

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**Answers:**

**Mass of ethanol: 28.81 grams**

**D=m/v**

**.7893 g/cm3 = m/36.5mL**

**Volume of lead: 4.41 mL**

**D=m/v**

**11.3437 g/cm3 = 50g/v**

**11.3437(v)= 50g**

**v= 50g/11.3437 g/cm3**

**Glucose has a greater mass than Sucrose:**

**Sucrose: 1.27 g/cm3 = m/100 cm3**

 **msucrose= 127g**

**D=m/v**

**Glucose: 1.54 g/cm3 = m/100 cm3**

 **mglucose= 154g**

***Without calculations consider the relationship among Density, mass and volume. Considering the formula for Density: D=m/v, Density and volume have an inverse relationship. Density and mass a direct relationship. With volume of each substance the same, the substance with the greatest Density also has the greatest mass.***