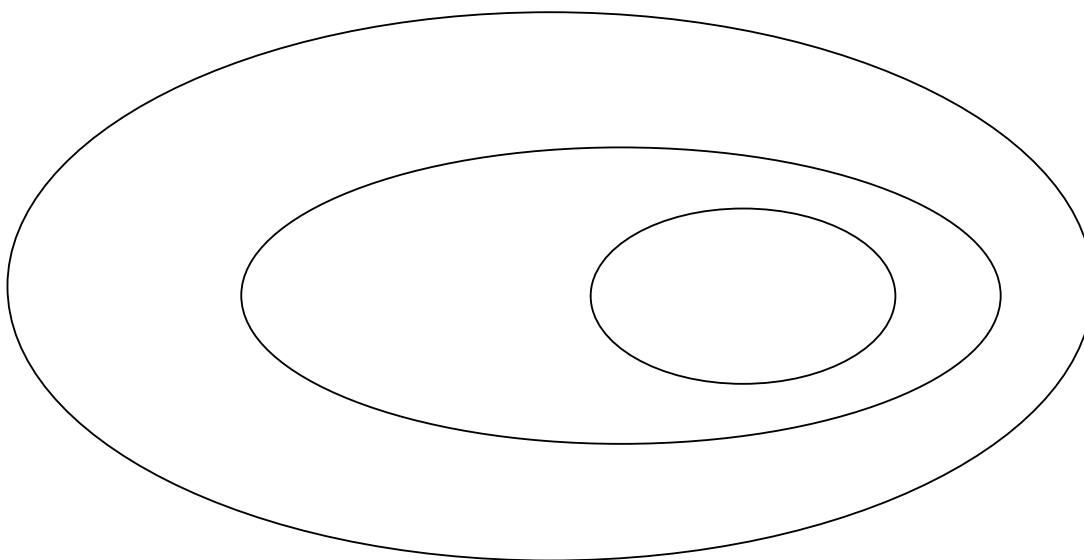
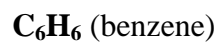


Review and Practice Exercises on IMFs and Solutions

Practice Exercise: Consider the intermolecular forces present in the molecules below and place them in the relational (Venn) diagram, where the largest circle represents those molecules that participate in London dispersion forces (aka. induced dipole-induced dipole), the middle circle represents those that have dipole-dipole forces and the smallest circle represents those that participate in 'hydrogen bonding'.



Practice Exercise: Consider the intermolecular forces between solute and solvent and draw a molecular level picture indicating the dominant intermolecular force present. In cases where 'hydrogen-bonding' exists, indicate if the solute can act as a 'hydrogen-bond' donor, acceptor or both.

Sodium chloride in Water

2-Propanone in Water

Carbon tetrachloride in Benzene

Ethanol in Water

Practice Exercises on IMFs and Solutions

Practice Exercise: Describe the molecular level processes that need to take place in order for a pure solute to dissolve in a pure solvent in order to make a solution. Consider the energy requirements for each process and predict which will be endothermic or exothermic.

Practice Exercise: Use a molecular level description to explain the difference between *melting* and *dissolving*? Illustrate your answer using chemical reactions.

