**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Homework Set #2**

 1. Draw the structure that corresponds with each name.

 a.) 3-ethyloctane

 b.) 4-isopropyldecane

 c.) 2,3-dimethyl-4-propylnonane

 d.) 2,2,4,4-tetramethylhexane

2. Identify the pairs in each set below as either identical structures or isomers

 a.)



 b.)



 c.)

 d.)

 3. Provide either the name or skeletal structure for each compound below as appropriate.

4. Provide either the name or skeletal structure for each compound below as appropriate.



 5. Which conformation of 1,2-dibromoethane would you expect to have the larger dipole moment? The observed dipole moment of 1,2-dibromoethane is μ = 1.0 D. What does this tell you about the actual conformation of the molecule?

 6. Consider 2-methylbutane. Sighting along the C2-C3 bond:

 a.) Draw a Newman projection of the most stable conformation

 b.) Draw a Newman projection of the least stable conformation

7. Label each carbon in the following molecules as primary, secondary, tertiary, or quaternary