Chemistry 122 **Alkanes Worksheet**

1. Identify each of the following alkanes:
   a. C_5H_{12} b. CH_4 c. C_3H_8
   d. C_2H_6 e. C_9H_{20} f. C_7H_{16}
2. Name the following alkyl group:
   a. C_2H_5 b. C_8H_{17} c. C_5H_{11}
3. Name each of the following alkanes
   a. $CH_3\text{-}CH_2\text{-}CH_3$ b. $CH_3\text{-}CH(CH_3)\text{-}CH_2\text{-}CH_2$ c. $CH_3\text{-}CH_2\text{-}CH_2\text{-}CH_3$

   d. $CH_3\text{-}CH(CH_3)\text{-}CH_2\text{-}CH(CH_3)\text{-}CH_3$ e. $CH_3\text{-}CH_2\text{-}CH(CH_3)\text{-}CH_2\text{-}CH_2$ f. $CH_3\text{-}CH_2\text{-}CH(CH_3)\text{-}CH_2\text{-}CH_3$

4. For each of the following IUPAC names, draw a structural diagram. (You may want to draw all hydrogen atoms as bonded atoms.)
   a. 2-methylpentane b. 3-ethylhexane
   c. 2,3-dimethylbutane d. octane
   e. 2,3-dimethylhexane f. trimethybutane
   g. 3-ethyl-3-methylhexane h. 2,2,3-trimethylpentane

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