

1. Give the molecular formula, the structural formula, the condensed structural formula, and the abbreviated planar formula for pentane.

Molecular formula: C_5H_{12}

Structural formula: $CH_3CH_2CH_2CH_2CH_3$

Condensed structural formula: $CH_3(CH_2)_3CH_3$

Abbreviated planar formula:



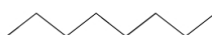
2. Give the molecular formula, the structural formula, the condensed structural formula, and the abbreviated planar formula for octane.

Molecular formula: C_8H_{18}

Structural formula: $CH_3CH_2CH_2CH_2CH_2CH_2CH_2CH_3$

Condensed structural formula: $CH_3(CH_2)_6CH_3$

Abbreviated planar formula:



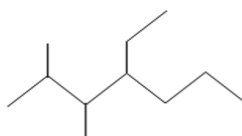
3. Give the molecular formula, the structural formula, the condensed structural formula, and the abbreviated planar formula for 4-ethyl-2,3-dimethylheptane.

Molecular formula: $C_{11}H_{24}$

Structural formula: $CH_3CH(CH_3)CH(CH_3)CH(CH_2CH_3)CH_2CH_2CH_3$

Condensed structural formula: $CH_3CH(CH_3)CH(CH_3)CH(CH_2CH_3)(CH_2)_2CH_3$

Abbreviated planar formula:



4. Give the
formula, the
the abbreviated

4-ethyl-2,3-dimethylheptane

molecular formula, the structural
condensed structural formula, and
planar formula for 3,3-diethyloctane.