

Use the metrics supplied to complete the table here:

<https://mrd123.de/index.php/alkanes-physical-properties/>

Make 3 graphs as follows:

Graph	Y axis	X axis
1	melting point	Nr carbon atoms
2	boiling point	Nr carbon atoms
3	density	Nr carbon atoms

Analyse the Physical Properties of Alkanes

Questions

1. Describe and explain the general patterns for melting points as the number of carbon atoms increases.

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2. Describe and explain the general patterns for boiling points as the number of carbon atoms increases.

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3. Describe and explain the general patterns for density as the number of carbon atoms increases.

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4. Predict the physical states at room temperature ($\sim 23^\circ\text{C}$) alkanes with 15 (pentadecane), 20 (eicosane) and 30 (triacontane) carbon atoms.

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5. What is the physical state at room temperature of an alkane that has a boiling point with a negative value? Explain this in terms of intermolecular bonds.

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Analyse the Physical Properties of Alkenes – Use “Alkenes Physical Properties” table in CODAP

6. Briefly compare the alkane and the alkene graphs.

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