**Properties of carbon compounds**

**2019**

**1.** The tables below show the boiling points of some alkanes and alkenes.

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(i) What is the relationship between the number of carbon atoms in an alkane molecule and the boiling point

of the alkane molecule?

You should use information in the table above to explain your answer.

(ii) What does the information in the tables above show about any similarities and differences in the boiling points of alkanes compared to alkenes?

**2.** The following table shows selected data for the compounds methanol, ethanol, and propene.

Compare and contrast the data in the table, with reference to the type of organic compound and your knowledge of the structure and chemical properties of the compounds.



In your answer, you should explain how you used the information in the table to compare and contrast the solubility and combustion reactions of the compounds.

**2018**

**1.**



Compare and contrast alkanes and alkenes in relation to:

• the structure and bonding of alkanes and alkenes

• trends in their boiling points.

In your answer, you should refer to the graph above, and your knowledge of the structure of alkanes and alkenes.

**2.** The following table shows selected data for three compounds, A, B, and C.



It is known that the compounds are: ethane, ethanol, and propane.

Use the information in the table to identify each of the compounds listed above.

Justify your choices by referring to the information given in the table above.

Explain how you used the structure and properties of these compounds to distinguish between them.

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