**SCH4U - Organic Chemistry test**

1. a) Identify the organic compounds from those below.

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b) How did you identify the organic compounds above? What idea did you use?

1. a) Which of these three compounds is likely to be the **most** soluble in water?

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b) Explain your reasoning. How did you make your decision?

1. Examine the graph of boiling points vs chain length in carboxylic acids and alkanes.



<http://www.chemistryrules.me.uk/junior/organic_b_pts.gif>

1. Interpret the graph. What does it say?
2. Why does the boiling point of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ increase with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_?
3. Why might a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have a higher boiling point than the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the same chain length?
4. Write balanced chemical equations using structural models to give an example of reactions that fit the details in column 1. Name all compounds.

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| **Reaction details** | **Balanced chemical equation (using structural formulae)** |
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1. Name the following structures.

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