

GCSE Chemistry: Isomers and Functional Groups

Priority Learning

Worksheet

Name: _____ Date: _____

Question:	1	2	3	4	5	Total
Marks:	1	11	3	6	8	29
Score:						

Aims of this test:

- Practicing reciting the definitions needed for your exam.
- Practicing recognising and naming structural isomers of hydrocarbons.
- Becoming familiar with different functional groups.

1. Explain what an isomer is. (1 mark)

.....
.....
.....

2. This questions concerns functional groups and organic compounds.

(a) What is meant by a functional group? (2 marks)

.....
.....
.....

(b) Are functional groups covalently or ionically bonded to the rest of the hydrocarbon? Or can they be either? (1 mark)

.....

(c) What is meant by a homologous series. (2 marks)

.....
.....

(d) i. What homologous series has the OH functional group? Sketch the structural formula and name a compound in this homologous series with 3 or more carbons in. (3 marks)

ii. Draw and name a structural isomer of the compound you named above. (3 marks)

3. Sketch 2,2,3-trimethylbutane. (3 marks)

4. This question concerns octene.

(a) Sketch the structural formula of oct-3-ene. (1 mark)

(b) Sketch the structural formula of 2-methyloct-4-ene. (2 marks)

(c) Sketch the structural formula of 2,4,4-trimethyloct-7-ene. (3 marks)

5. This question concerns the carboxylic acid homologous series.

(a) What is the functional group of the carboxylic acids? (1 mark)

.....

(b) Sketch the structural formula of ethanoic acid. (2 marks)

(c) What is the chemical formula of ethanoic acid? (1 mark)

.....

(d) What is the empirical formula of ethanoic acid? (1 mark)

.....

(e) Sketch the structural formula of 2-methylbutanoic acid. (3 marks)