

Name:

Date:

Atom Economy

GCSE CHEMISTRY

Mark

Grade

Materials

For this paper you must have:

- Ruler
- Pencil and Rubber
- Scientific calculator, which you are expected to use when appropriate

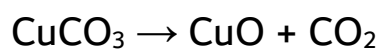
Instructions

- Answer all questions
- Answer questions in the space provided
- All working must be shown

Information

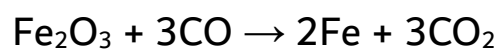
- The marks for the questions are shown in brackets

1. Calculate the atom economy to form copper(II) oxide from copper(II) carbonate.



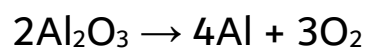
Answer:

2. Calculate the atom economy to form iron from iron oxide.



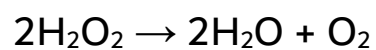
Answer:

3. Calculate the atom economy to form aluminium from aluminium oxide.



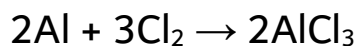
Answer:

4. Calculate the atom economy to form oxygen from hydrogen peroxide.



Answer:

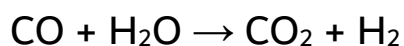
5. Calculate the atom economy to form aluminium chloride from aluminium in this reaction.



Answer:

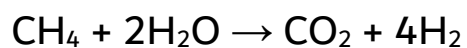
6. Hydrogen (H₂) has many uses, including as the fuel in many fuel cells. It can be made in several ways.

- a) Calculate the atom economy to form hydrogen by method 1.



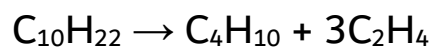
Answer:

b) Calculate the atom economy to form hydrogen by method 2.



Answer:

7. Calculate the atom economy to form ethene (C₂H₄) from cracking decane (C₁₀H₂₂),



Answer: