

Knowledge



1. 24dm^3
2. Concentration = mass/volume
3. Mass = Mr x moles
4. The percentage of reactants forming useful products
5. How much product you get from a reaction
6. How much product you should get from a reaction
7. \rightleftharpoons
8. Divide by 1000

Application

1. Atom economy = $\frac{\text{RFM of desired products}}{\text{RFM of all reactants}} \times 100$

2a) 56%

2b) 49%

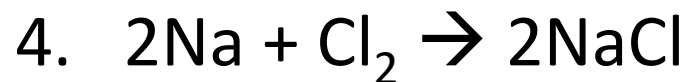
2c) 90%

3a) 84dm³

3b) 48dm³

3c) 2.4 dm³

3d) 0.024dm³



4.68g of NaCl = $4.68/58.5 = 0.08$ moles

You would need half as many moles of Cl_2 so 0.04 moles

$$0.04 \times 24 = \underline{0.96\text{dm}^3}$$

5. The reaction may be reversible, some product may be lost during separation, the reaction may not complete.

6a) 10.1g



123.5 73 134.5 18 44

11

10.1

÷134.5
x 11

÷134.5
x 11

6b) $79/100 \times 11 = 8.7\text{g}$

7a) 159.5g

7b) 1000cm^3 or 1dm^3

7c) $20/1000 \times 159.5 = \underline{3.19\text{g}}$